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EDWARDS'S

BOTANICAL REGISTER:

OR,

ORNAMENTAL FLOWER-GARDEN

AND SHRUBBERY:

CONSISTING OF

COLOURED FIGURES OF PLANTS AND SHRUBS,

CULTIVATED IN BRITISH GARDENS;

ACCOMPANIED BY THEIR

History, Best Method of Treatment in Cultivation, Propagation, &c.

EDITED

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MISSOURI
BOTANICAL
GARDEN.

SHOUT
SHARE
IT

Miss Drake del.

Pubd by J. Ridgway 169 Piccadilly June 1 1845

E. Barclay sc.

CATTLEYA maxima.

The Larger Cattleya.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ. § EPIDENDREÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173. *ined.*)

CATTLEYA. Lindley.

C. *maxima;* pseudobulbis clavatis elongatis altè sulcatis, foliis subemarginatis basi sublatioribus, pedunculo 2-3-floro spatha ancipiti longiore, sepalis lanceolatis petaloideis subrecurvis, petalis pluries latioribus convexis undulatis reticulatim pictis, labello convoluto apice explanato oblongo subcrispato-lobato per axin lævissimo.

C. maxima, *Lindl. gen. & sp. Orch. p.* 116. *Bot. Reg.* 1844. *sub t.* 5. *Journal of the Horticultural Society, vol.* 1. *part* 1. *page* 64.

The more our knowledge of the varying forms of Orchids extends, the less do we feel able to determine what characters or peculiarities of structure are of real value in distinguishing species. Every thing which among other plants has gained a fixed value, appears here to be unstable; and even the most marked differences in form are proved by incontestable evidence to grow out of each other.

This being so, we may be excused for doubting how far this beautiful plant can lay claim to the rank of a species; for it evidently approaches both C. Mossiæ and labiata in many important particulars. Its main peculiarities consist in its long-channelled pseudo-bulbs, and in its very convex wavy petals, which are quite different in appearance from the thin, nearly flat, petals of C. Mossiæ and labiata.

If, however, we attach any value to differences of colour, then indeed there remains no difficulty in separating this plant; for it is remarkable for the dark crimson veins richly traced upon its pallid lip, and for a beautiful net-work of purple streaks, which is drawn over all their surface. At first, too, the colour of the flowers is so pale as to be almost white; but the tints heighten day by day, till at last the blossoms acquire the rich tint represented in the accompanying plate.

January, 1846.

In the number of the New Journal of the Horticultural Society above referred to, the following account of the plant is given.

"The pseudo-bulbs are from six to eight inches long, compressed, and considerably thicker at the upper than the lower end, with a few shallow furrows on each side. The leaves are single, of the same length, very regularly oblong, and rather concave until they become old. The flowers are seven inches across, and two in number, on the end of a peduncle a few inches longer than a compressed pale green spathe; but Mr. Hartweg reports that they are really much larger, and grow as many as four or five in a cluster. When they first expanded they were of nearly the same colour as those of Cattleya intermedia, but after some days the colour brightened and deepened till at last it was equal to that of Cattleya labiata. The sepals are lanceolate and convex; the lateral ones twisted and turned backwards; the dorsal one still more convex, and curved gracefully upwards from the base of the column. The petals are about two inches broad, spreading forwards on each side of the lip, and after a time become beautifully painted with purple veins. The lip is about three inches long, undivided; at the lower half flat and channelled, so that its edges meet over the column and form a ridge there; the anterior half gradually spreads into an oblong plate, very much curled and toothletted; its ground colour is a very pale pink, over which is drawn a coarse network of the richest crimson veins. Along its middle a narrow yellow polished line is drawn, and forms a beautiful contrast with the crimson veins that surround it. There is no trace of ridges, glands, or elevated lines upon any part of the surface of the lip.

"This requires to be treated in a similar way to the different species of Cattleya, cultivated in almost every collection: rough peat and potsherds are apparently the best materials for potting it in. During summer an ample supply of water is necessary at its roots, but as little as possible on its leaves, except in the form of steam. Mr. Hartweg states that it requires a temperature of 75°. In winter, if the atmosphere is kept moist, very little water will be necessary for a few weeks."

We take advantage of the present opportunity to print a memorandum from Mr. Hanbury, relating to the Russell variety of C. granulosa, figured at t. 59 of the last volume of the Botanical Register.

"In reference to your remarks upon the country where Cattleya granulosa is found, will you pardon my saying that I think you are mistaken, as I received many plants about two years ago from Paraiba, one of which flowered this autumn."

Miss Drake

Pub. by J. Ridgway 169 Piccadilly Jan.y 1846

G. Barclay Sc

MASTACANTHUS sinensis.

Chinese Beardwort.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. VERBENACEÆ. (VERBENES, *Vegetable Kingdom, p.* 663. *ined.*)

MASTACANTHUS, Endl.—*Calyx* quinquefidus, laciniis acutis erectis, æqualibus, fructiferis conniventibus. *Corolla* ringens, tubo calycem æquante, limbo quinquefido, labii superioris laciniis quatuor ovatis, erectis, subæqualibus, labio inferiore magno patente incurvo, fimbria longa capillari terminato. *Stamina* 4, didynama, duo longiora exserta; *antheræ* subrotundæ. *Ovarium* subglobosum, quadrisulcum. *Stylus* bifidus, staminibus brevior; stigmata simplicia. *Achænia* (?) 4, subrotunda.———Frutex *cantoniensis, pedalis, lignosus, graveolens;* ramis *adscendentibus, paucis,* foliis *oppositis, ovato-oblongis, obtusis, serratis, basi integerrimis, lineatis, tomentosis,* petiolis *brevibus,* floribus *axillaribus,* verticillis *fastigiatis,* corollis *albis* (*azureis*).—Endl. gen. 3720.

M. sinensis, *Endlicher in Walpers' Repert.* iv. 3.
Barbula sinensis, *Loureiro Fl. Cochinch.* 444.

This is an autumn-flowering herbaceous plant, growing from one and a half to two feet high, and forming neat little bushy tufts. It is, in a gardening point of view, of some importance; because it furnishes an abundance of rich violet blossoms at a season when that colour, never abundant, is peculiarly rare in gardens.

It has been received from Mr. Fortune, who sent it from China to the Horticultural Society, in whose garden it flowered in October last. It grows wild in the neighbourhood of Canton, and Mr. Fortune found it in Chusan, and at Koo-lung-soo.

It was originally described by Loureiro, under the name of Barbula sinensis, in allusion to the beard or fringe which terminates one of the lobes of the corolla. The name Barbula being, however, universally applied to a genus of Mosses, that of Mastacanthus has been substituted by Prof. Endlicher: we presume from the Greek $\mu\alpha\sigma\tau\alpha\xi$, a moustache.

The plant belongs to the order of Verbenes, to which it is usually regarded as being of dubious affinity. And certainly it exhibits some peculiarities of structure which justify the doubts that have been entertained about it; for its ovary is distinctly one-celled, with two double placentæ turning aside, and bearing single ovules hanging down from their upper part. That is to say, the two carpels, of which the ovary of a Verbene is usually composed, instead of uniting in the middle and so dividing its cavity into two or more cells, are not able to touch.

The specimens which were produced in the garden of the Horticultural Society were in many instances in an anomalous condition. Some of them had three carpels and six ovules; others had an imperfect carpel rolled up between the two regular ones, and occupying the very axis of the flower.

These peculiarities are represented in the accompanying plate; where fig. 1. represents a single flower; 2. a stamen; 3. a perpendicular section of an ovary in its usual condition, the face of the imperfect partition being next the eye; 4. a transverse section of the same; 5. a transverse section of an ovary in the anomalous state above alluded to.

It is a greenhouse plant, which appears to grow freely in a mixture of rough sandy loam and peat, and like other soft woody plants requires plenty of pot-room. During summer an ample supply of water should be given to its root, and it may be syringed overhead once or twice a day; but in consequence of its flowering in autumn, syringing should be discontinued as soon as the flower-buds are formed, otherwise they will be liable to damp off. In winter very little water is required; nor is it necessary to apply fire-heat, except to keep off frost. It strikes freely from cuttings of young wood under ordinary treatment.

Miss Drake del.

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J. Basire sc.

NEPTUNIA plena.

The Double-yellow Water-Sensitive.

POLYGAMIA *MONŒCIA*.

Nat. ord. FABACEÆ. (LEGUMINOUS PLANTS, *Vegetable Kingdom, p.* 544. *ined.*)

NEPTUNIA, Lour.—*Flores* superiores, v. rarius omnes hermaphroditi, sessiles. *Calyx* campanulatus. *Petala* 5, ad mediùm cohærentia v. rarius libera. *Stamina* 10, rarius 5, libera, exserta. *Antheræ* ovatæ, glaudula stipitata superatæ. *Flores* inferiores nunc neutri filamentis filiformibus anantheris, nunc masculi. *Legumen* oblongum, a stipite deflexum, planum, continuum, valvulis 2 membranaceis dehiscens, intus inter semina incomplete septatum, epulposum. *Semina* transversa, funiculo filiformi appensa.—— Herbæ *suffruticesve inermes, prostratæ v. natantes.* Folia *bipinnata, foliolis parvis.* Glandula *inter v. infra pinnas jugi infimi v. sæpius nulla.* Stipulæ *membranaceæ, oblique cordatæ, acuminatæ.* Pedunculi *axillares, solitarii,* bracteis 1-2 *stipulæformibus deciduis onusti.* Capitulum *ad apicem pedunculi ovato-globosum.*—Bentham.

N. *plena ;* prostrata v. adscendens, glabra v. hinc inde minute puberula, ramis compressis triquetrisve, pinnis 3-5-jugis, glandula inter pinnas infimas, foliolis 12-40-jugis, capitulis ovoideis, floribus neutris numerosis, staminibus 10, legumine breviter stipitato 5-20-spermo.—*Bentham in Hooker's Journal,* iv. 355.
Mimosa plena, *Linn. Sp. Pl.* 1502. *Mill. ic. t.* 182. *f.* 2.
Mimosa punctata, *Linn. Sp. Pl.* 1502.
Mimosa adenanthera, *Roxb. Fl. ind.* 2. 554.
Desmanthus plenus, *Willd. Sp. Pl.* 4. 1045. *DC. Prodr.* 2. 444.
Desmanthus punctatus, *Willd. l. c. p.* 1047. *DC. l. c.* 445.
Desmanthus polyphyllus, *DC. Prodr.* 2. 444.
Neptunia plena, *Benth. in Hooker's Journal,* 4. 355.
Neptunia polyphylla, *Benth. l. c.* 2. 129.

This curious Water plant, with sensitive leaves, has been raised from seeds recently sent from Jamaica, by Mr. Purdie ; and a specimen of it, from the collection of His Grace the Duke of Northumberland at Syon, was exhibited at a meeting of the Horticultural Society in October last. Its long spongy stems throw out innumerable thread-like roots, and, floating in the water, speedily produce broad masses of leaves cut up into myriads of irritable leaflets.

It seems to be common in all parts of tropical America, Botanists having received it from Guiana, Mexico, Brazil and

various West India islands. It would also appear to be subject to many diversities of appearance, in consequence of which it has received several different names. Linnæus called it Mimosa plena, or the double Mimosa, because of the broad petal-like barren stamens which occur in the lower flowers of each head. Similar appearances occur in the genera Desmanthus and Dichrostachys, and justify Linnæus in the name which he applied to it.

The genus derived its name from the Portuguese Loureiro, who ventured to enlist the god of the ocean in the service of Botanical nomenclature. Among the circumstances by which it is known from neighbouring genera are its peculiar floating habit, its anthers tipped with a stalked gland, and its flat jointless stipitate pod with membranous valves.

One of the species, Neptunia oleracea, yields a material very like the Rice paper of the Chinese, but coarse and inferior in quality to that beautiful substance. It is also said to be used by the Chinese in salads, its spongy floating stems being crisp and juicy: but Loureiro adds that it is not very digestible.

Being a native of the hottest part of the tropics, the gardeners who may wish to cultivate this plant will do well to bear in mind that the water in which it is planted should have at least 80° of temperature, or it cannot be expected to thrive.

It seems to be a perennial.

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G. Barclay del.

BUDDLEA Lindleyana.

The purple Chinese Buddlea.

DIDYNAMIA *ANGIOSPERMIA*.

Nat. ord. SCROPHULARIACEÆ. (FIGWORTS, *Vegetable Kingdom, p.* 681. *ined.*)

BUDDLEA, L.—Botanical Register, t. 1259.

B. *Lindleyana;* glabra, fruticosa, ramis tetragonis, foliis ovatis acuminatis breviter petiolatis nunc subserratis, racemis terminalibus verticillatim spicatis tomentosis, calycis dentibus brevibus triangularibus, corollæ tubo elongato infra medium ventricoso laciniis obtusis.—*Fortune in Bot. Reg.* 1844. *misc.* 25. *char. emend.*

One of the earliest plants found by Mr. Fortune, upon his arrival in Chusan, was that which is now represented. He immediately sent home seeds, with a particular request that the species, if new, might bear its present name; and in little more than three months after they were posted in Chusan, plants were growing in the Garden of the Horticultural Society. He at the same time transmitted a Chinese drawing, which represented it as a plant of considerable beauty.

Dried specimens have now reached this country, and one of them is before us. It consists of a branch not quite a foot and half long, on which there have been growing seven spikes of flowers from two to three inches long each. The natural appearance of those flowers will be seen from our figure. Their colour is a deep rich violet, a little verging upon grey, on account of the numerous short hairs with which they are closely covered.

In cultivation this shrub has hitherto proved unwilling to flower; it grows very vigorously, running to wood as we say, and requiring some special mode of management in order to stop its exuberant vegetation. It is about as hardy as a Fuchsia. The specimen figured was taken from a plant in the large conservatory of the Horticultural Society; but it was

by no means so beautiful as the wild plant must be. Probably very poor gravelly or clayey soil, and a hot dry atmosphere would suit it much better than the rich mould usually found in gardens.

It belongs to a set of Asiatic species, of which B. curviflora, sundaica, acuminata and Missionis are examples; but it is readily known from all of them by the characters included in the specific phrase above given.

It varies in the edging of the leaves, most of which are perfectly undivided; but they occasionally become serrated, like a Peach leaf.

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VERONICA salicifolia.

Willow-leaved Speedwell.

DIANDRIA *MONOGYNIA.*

Nat. ord. SCROPHULARIACEÆ. (FIGWORTS, *Vegetable Kingdom, p.* 681. *ined.*)

VERONICA, L.

V. *salicifolia ;* fruticosa, racemis lateralibus nutantibus, foliis lanceolatis sessilibus integerrimis serratisve enerviis.
V. salicifolia, *Forst. Prodr. p.* 3. *n.* 11. *Vahl. Symb.* 3. 4. *A. Cunningham in Ann. H. Nat.* 1. 457.
V. Lindleyana, *Paxton Magazine of Botany.*

New Zealand and Tasmannia have already brought us acquainted with those beautiful Speedwells, which bear the names of V. *speciosa*, *decussata*, *labiata*, and *perfoliata ;* and many more have yet to be introduced as gay shrubs or herbaceous plants. Some indeed are probably even now in our gardens, although they have not been hitherto scientifically determined.

That which is here given is of the latter class. It has indeed been already well figured in Mr. Paxton's Magazine, but no attempt has been made to determine whether it is really new or not.

We entertain little doubt that it is the Willow-leaved Speedwell of Forster, found by that Botanist in New Zealand, and introduced to our gardens for the first time a few years since. The point is not however entirely free from doubt, and the conclusion at which we have arrived is open to revision.

In all the accounts which we have of the Willow-leaved Speedwell, it is said to have perfectly entire leaves ; but in the garden plant they are serrated, or at least some are. We find however that wild specimens from Mr. Bidwill, Mr. Allan Cunningham, and others, in our herbarium, are absolutely identical with this plant, so far as cultivated and wild specimens

are comparable, except that the leaves are in this instance occasionally serrated; but as the serratures of the leaves are quite uncertain in the cultivated plant, we do not feel justified in attaching importance to that circumstance. Mr. A. Cunningham's specimens of V. salicifolia, which he had doubtless verified with all possible care, are we think not distinct, except in the serratures as already mentioned

The main difficulty consists in reconciling Vahl's statement that the flower-stalks of V. salicifolia are capillary; for it must be confessed that in a wild state this plant does not answer to that description. Yet in other respects it is so much the same, that we incline to the belief that the term capillary was used loosely by the Danish Botanist.

In some respects the plant resembles V. Cataractæ, of which authentic specimens out of the herbarium of Mr. Donn of Cambridge, are before us; but the looseness of the racemes and the coarse callous-toothed serratures of that plant are like nothing observable in this.

Our drawing was made in the Nursery of Mr. Glendinning of Turnham Green, in August last.

It is a green-house plant, which will grow freely in any light sandy soil. Like V. speciosa, it requires an ample supply of water during the summer months, and air at all times when weather permits. As this species flowers on the young wood, it may be cut back after flowering, if necessary; but as young plants are much more handsome than old, it is better to replace them every two or three years. It strikes freely from cuttings. In winter nothing more than ordinary treatment is required.

LOBELIA glandulosa.

Glandular Lobelia.

SYNGENESIA *MONOGAMIA.*

Nat. ord. LOBELIACEÆ. (LOBELIAD, *Natural System of Botany, p.* 692. *ined.*)

LOBELIA. L.

Section II. RAPUNTIUM.

§ 2. ***Only the lower anthers bearded at the point, or terminated by bristles.*** —— Corolla blue or white, in the last species of the division lilac or rose-coloured, or even red.—*Alph. DC. Prodr.* 7. 376.

* The re-entering angles of the calyx not covered by reflexed plates.

L. *glandulosa;* caule erecto subpiloso subramoso, foliis lanceolatis glanduloso-serrulatis subcarnosis puberulis glabrisve, floribus spicato-racemosis, bracteis ovato-acutis grossè glanduloso-serratis pedicello longioribus, bracteolis linearibus glanduliferis duabus basi pedicellorum subopppositis, tubo calycis hispido, lobis lineari-acuminatis margine revolutis integris v. dentatis corollâ ad faucem pilosâ paulò brevioribus.—*Alph. DC. l. c. p.* 378.

L. glandulosa, *Walter's Flora of Carolina, p.* 218. *Elliott's Sketch,* 1. 265.
L. crassiuscula, *Michaux Fl. Bor. Am.* 2. 152. *Nuttall Gen. Am.* 2. *p.* 76.
Rapuntium glandulosum, *Presl. Prodr. p.* 21.

This is a hardy herbaceous plant, of the easiest cultivation, growing freely in any kind of garden soil, and not unlike the well-known L. siphilitica, but much less showy. It attains the height of two and a half feet, flowers in September and October, and, like so many of its race, prefers a moist situation to a dry one. Elliot says that is grows in damp Pine barrens.

It has been raised in the Garden of the Horticultural Society, from seeds collected in North Carolina, and presented by Wm. Dimes, Esq., F.H.S.

The stem is between three and four feet high, quite undivided, angular and covered with short hairs. The leaves are sessile, oval-lanceolate; near the base of the stem narrowed into a short winged stalk, irregularly toothed, and bordered

with hard white conical glands, which also appear on the edge of the bracts and calyx, from which remarkable circumstance the species derives its name. The spikes are something less than a foot long, and covered at short intervals by pale blue flowers, rather smaller than in the well-known Lobelia siphilitica. The sepals are reflexed on the edge and slightly toothed. The lower lip of the corolla consists of three sharp ovate lobes, the upper of two very narrow channelled reflexed ones.

Two varieties of it are mentioned by M. Alphonse DeCandolle; one a smaller plant with a smooth corolla and calyx, the other with oblong downy leaves. We have not remarked either in gardens. It is also said to vary with oval, lanceolate, and linear leaves, which are more or less toothed.

RUELLIA macrophylla.

Large-leaved Ruellia.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. ACANTHACEÆ. (ACANTHADS, *Vegetable Kingdom, p.* 678. *ined.*)

RUELLIA, L.—Calyx ad basim quinquepartitus, laciniis subæqualibus linearibus apice subdilatatis herbaceis, vel æqualibus acuminatis. *Corolla* infundibuliformis tubo in limbum anguste campanulatum quinquefidum continue transeunte, laciniis æqualibus obtusis. *Stamina* quatuor, didynama, basi faucium inserta. *Antheræ* oblongæ, bilocellatæ, locellis parallelis contiguis æqualibus muticis vel basi mucronulatis. *Stigma* subulatum, spirale, dorso spongiolosum, caniculatum, basi denticulo auctum. *Capsula* angusta, quadrangularis, ad basim usque bilocularis, a basi ultra medium sex-octosperma. Dissepimentum completum, adnatum. *Semina* retinaculis mediocribus suffulta.—Inflorescentia:—*spicæ, plerumque in capitulorum formam contractæ, foliaceo-bracteatæ ideoque rudes et parum conspicuæ.* Bracteolæ *nullæ vel angustæ.* Flores *mediocres.* Pleræque herbacæ sunt et hirsutæ. *Nees v. Esenbeek in Wallich's Plantæ Asiaticæ rariores,* 3. 82.

R. *macrophylla;* foliis ovato-lanceolatis integerrimis pubescentibus, floribus dichotomè paniculatis, bracteis linearibus ramulis subæqualibus, bracteolis squamæformibus, corolla bilabiatâ laciniis ovalibus obtusis supremis approximatis cæteris æquidistantibus, staminibus exsertis.

R. macrophylla *Vahl Symbolæ,* 2. 72. *t.* 39.

Herba R. formosæ *similis sed* floribus *paniculatis* foliis *majoribus cæterisque characteribus diversissima.*

This fine herbaceous plant is a native of Santa Martha, according to Vahl who first described it. His figure, however, was taken from a starved wild specimen, and gives no idea of the beauty of the species in the hands of English gardeners. He supposed that it habitually produced two flowers on a stalk, while in fact it bears large branching forked panicles, loaded with flowers of glowing scarlet, and nearly three inches long.

In that state it was exhibited at a meeting of the Horticultural Society in October last, by Mr. Carton, gardener to his Grace the Duke of Northumberland, and it was indeed worthy of the noble collection which furnished it.

February, 1846.

For the present it must remain among the genus Ruellia, but its two lipped flowers will render it impossible to associate it eventually with R. latebrosa and its companions, which Professor Nees v. Esenbeek makes the type of that genus. We are, however, the less prepared to interfere with its name, because in all probability it has already been properly placed in the new volume of DeCandolle's Prodromus, now, we believe, in the press.

It should be an instruction to all persons sending home South American seeds, not to forget the fine species of Acanthads, with which that part of the world abounds; for although many are but weeds, yet others are quite as striking for their beauty as this and the Justicias, Aphelandras, &c., already in cultivation. They were formerly here in many instances, but requiring a moist warm atmosphere at a time when gardeners did not know how to obtain heat without dryness, they soon became sickly and died. Among the reputed species of this very genus, we see in our herbarium the Ruellia trivialis, grandiflora, and longiflora of *Salzmann*, all from the woods of Bahia, every one of which is a finer species than even this. Nor are the East India species inferior, as is attested by the numerous kinds of Goldfussia, Strobilanthes, Dipteracanthus, &c. with which botanists are familiar—only, however, in their dried gardens. As they are easily propagated and grown, all these would be real acquisitions, and might easily be had.

This species requires to be kept in a stove, and being a plant of free growth, will succeed in almost any sort of soil. During summer an ample supply of water should be given to its root, and syringed over head once or twice a-day. After flowering it should be cut back to secure a supply of young shoots from the bottom, for flowering the following season. This may be done advantageously once or twice, but for such free growing plants it is best to renew them every three years. In winter, when syringing would be injurious, it will be necessary to keep up a humid atmosphere, as this plant is very liable to be attacked by red-spider. It is easily multiplied by cuttings of young wood under ordinary treatment.

ABELIA rupestris.

Rock Abelia.

PENTANDRIA *MONOGYNIA*.

Nat. ord. CAPRIFOLIACEÆ. (CAPRIFOILS, *Vegetable Kingdom, p.* 766. *ined.*)

ABELIA, *R. Br.*—*Calyx* tubo cum ovario connato, lineari-oblongo, compressiusculo, hinc uninervi inde quinquenervi, apice in collum subangustato, limbi superi quinquepartiti laciniis foliaceis, spathulato-oblongis, persistentibus. *Corolla* supera, infundibuliformis, limbi quinquefidi patentis laciniis ovatis obtusis, subæqualibus. Stamina 4, corollæ tubo inserta, subdidynama, inclusa v. breviter exserta. *Ovarium* inferum, triloculare, loculis duobus pluriovulatis, abortientibus, tertio uniovulato fertili. *Ovula* angulo centrali loculorum inserta, sterilium uniseriata, inferiora pendula, supremum adscendens, loculi fertilis pendulum, anatropum. *Stylus* subexsertus: *Stigma* depresso-capitatum, indivisum. *Bacca* coriacea, exsucca, calycis limbo coronata, trilocularis, loculis duobus sterilibus minoribus, tertio fertili monospermo. *Semen* inversum, subcylindricum. *Embryo* in axi albuminis carnosi brevis, orthotropus; cotyledonibus obtusis, radicula umbilico proxima, supera.—Frutices chinenses *et* indici, *decumbentes v. erecti, debiles, glabri;* foliis *oppositis, petiolatis, dentato-crenatis, pedunculis modo axillaribus trichotomis v. trifidis, modo terminalibus indivisis, involucro uni-bi-multifloro, foliolis sex vel pluribus.* Endl. genera, no. 3334.

A. *rupestris;* ramis pubescentibus, foliis ovatis distanter serratis glabris subtus secus costam villosis, pedunculis bifloris, involucro nullo, sepalis 5 obovatis ciliatis, corollâ pubescente 5-fidâ, staminibus exsertis. *Lindl. in Journal of the Horticultural Society, vol.* 1. *p.* 63.

This new shrub is thus described in the Journal of the Horticultural Society—

"A small spreading bush, with deciduous, bright green foliage. The branches are very slender, covered with fine down, and deep reddish brown, when fully exposed to the sun. The leaves are opposite, ovate, distantly serrated, on very short stalks, quite smooth except at the midrib on the underside, where they are closely covered with short hairs. The flowers are pure white, something like those from the honeysuckle, and come in pairs from the axils of leaves belonging to the short lateral branches. At the base of the

ovary stand three very small bracts. The ovary itself is slender and downy; surmounted by a calyx of five obovate ciliated sepals, which are slightly stained rose-colour, and rather membranous. The corolla when expanded is half an inch long, funnel-shaped, downy, with a spreading border of five convex ovate blunt equal lobes, beyond whose tube extend four smooth filaments.

"The plant is distinguishable from Abelia chinensis of Brown, by its want of involucre, smooth leaves, and not trichotomous flowers; and from the Abelia serrata of Zuccarini and Siebold, by its five-leaved calyx.

"It has hitherto been treated as a greenhouse plant, but will probably prove hardy enough to stand out of doors in mild winters. The soil which appears most suitable is rough sandy loam, mixed with a little peat. Being of free growth, an ample supply of water is necessary during the summer season. In winter nothing different from the general treatment of greenhouse plants is required. It is propagated from cuttings of young wood, in the usual way.

"From its being sweet-scented, and the length of time it remains in flower, this will be of considerable importance as a greenhouse plant; and should it prove hardy, it will doubtless be a good addition to the shrubbery in consequence of its flowering in autumn."

It was received from Mr. Fortune, June 20th, 1844, as a fine dwarf shrub, found amongst rocks on the Chamoo Hills.

As Polemoniads form the characteristic feature of the Californian and Oregon Flora; Gentians and Saxifrages of European Alps; Befarias and Cinchonas of the Peruvian Cordillera; Schizanths of Chile; Aerids of tropical Asia, and yellow and brown Papilionaceous flowers of Australasia, so does the genus Abelia as surely indicate the eastern districts of Asia, for it has hitherto been found no where else abundantly. In those countries many species exist, of which the following have been described, viz.—

1. A. *chinensis* (R. Brown in Abel's Voyage, 1818, with a figure)——China.——The original species.
2. A. *triflora* (R. Brown in Wallich's Pl. As. rar. 1. t. 15);

a long-leaved shrub, from N. India, with pale pink flowers, and hairy calyxes.

3. A. *uniflora* (R. Brown in the same place, with neither figure nor description); a Chinese species, said to have been sent home by Mr. Reeves. If so, it is an upright branched smooth-leaved bush, with ovate coriaceous hairless leaves, which are sometimes entire, but frequently serrated, and opposite either in pairs or threes. Its flowers are however by no means solitary in vigorous specimens; they are, on the contrary, in threes as in other species. A specific character may be framed for it in the following terms. A. *uniflora*; foliis ovatis coriaceis oppositis ternatisque integerrimis serratisque glabris, pedunculis 1-3-floris, sepalis binis obtusis glabris corollâ tomentosâ brevioribus, staminibus paulò exsertis.

4. A. *serrata* (Siebold & Zuccarini, Fl. Japon. 1. t. 34); a Japan shrub, very near the last, but with larger and thinner leaves, short stamens, and a nearly smooth corolla.

5. A. *spatulata* (Siebold & Zuccarini, Fl. Japon. 1. t. 34. fig. II.); from Japan, with quite entire leaves, and a 5-leaved calyx.

6. A. *biflora* (Turczaninow in Bulletin Soc. Imp. Mosq. 1837. p. 152); north of China, with lanceolate serrated leaves, and a 4-leaved calyx.

7. A. *rupestris*. Now described.

If these shrubs are not all hardy, they must be nearly so, for they grow in countries which sustain a considerable degree of frost. Siebold found his Abelia serrata living with Azaleas, Andromedas, Vacciniums and Hydrangeas, in dry places, on the mountains of Japan, at an elevation of 1800 feet above the sea; and their natural relation to Honeysuckles, Viburnums and other Caprifoils, gives still greater hope that they will bear our climate as well as Leycesteria, at least.

We believe that another plant of this genus is what is called in the Gardens Vassalia floribunda, perhaps a corruption of Vanhallia; but we are too little acquainted with it to speak with certainty.

PÆONIA Wittmanniana.

The Yellow Pæony.

POLYANDRIA *DI PENTAGYNIA.*

Nat. ord. RANUNCULACEÆ. § HELLEBOREÆ. (CROWFOOTS, *Vegetable Kingdom, p. 425. ined.*)

PÆONIA. Linn.

P. *Wittmanniana;* herbacea, foliis triternatis, foliolis integerrimis ovatis rugosis subtus pubescentibus cæsiis, petalis ovatis luteis, carpellis erectis tomentosis apice recurvis.

P. Wittmanniana. *Hartwiss in litteris.*

A more remarkable acquisition than a yellow Pæony, not a pale straw-coloured species, which is only a spoiled white, but a true yellow flowered plant, does not often occur. And therefore we should have expected that it would have been put on record by the first Botanist who saw it. Nevertheless we are unable to find a description of any such plant in the latest Botanical works. It is not mentioned in the very recent compilation by Walpers, just published; nor do we find it in the last Index of the St. Petersburgh Garden, a place so rich in hardy plants.

All that we know for certain of its history is, that it was received in October, 1842, in the Garden of the Horticultural Society, from Mr. N. de Hartwiss, the Director of the Nikita Garden in the Crimea; that it is just mentioned in the London Journal of Botany for April, 1842, p. 207, by Dr. Fischer, of St. Petersburgh, who, in a letter to Sir William Hooker, makes the following statement:

"Mr. Hartwiss has received many interesting plants from Abcharia, sent by Count M. Worontzoff. Among them he has found a *yellow flowered Pæony*, Epimedium pinnatum (confined hitherto to Talysch alone), and Pinus Nordmanniana, (an Abies), said to be a showy and beautiful tree."

We understand that twenty-five guineas was demanded for a single plant of it in one of the great continental Nurseries.

The Mr. Wittmann, after whom it has been named, was, we believe, a traveller in the Taurian Caucasus, and afterwards gardener at Odessa.

The species has much the appearance of Pæonia Cretica, is quite hardy, grows where any other Pæony will grow, and flowers in May. At present we believe that the plant in the Garden of the Horticultural Society is unique in this country. It was nearly dead when received in 1842, and has only been recovered by the good management of Mr. Gordon.

DENDROBIUM Dalhousieanum.

Lady Dalhousie's Dendrobium.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ. § MALAXEÆ-DENDROBIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181. *ined.*)

DENDROBIUM, Swartz.

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§ STACHYOBIUM. *Caules teretes. Folia plana. Flores racemosi.*

D. *Dalhousieanum* (Paxton's Magazine of Botany, vol. 11. t. 145) ; caulibus teretibus subfusiformibus striatis, foliis ovato-lanceolatis obtusis, racemis horizontalibus 5-7-floris, bracteis squamæformibus, sepalis ovatis, petalis conformibus multò majoribus, labello indiviso oblongo medio constricto basi foveato parte superiore obtuso glanduloso villoso lateribus erosis glabris lamellis 3 pro medium brevibus laciniisque utrinque uniseriatis inflexis, cornu brevi obtuso.

The part of India where this beautiful species has been obtained is unknown. It was found in the Botanical Garden, Calcutta, by Mr. Gibson, who sent it to Chatsworth, with the name which had been given by Dr. Wallich, in compliment to the Countess of Dalhousie, from whom he had received it.

It is not among the wild specimens in our herbarium, unless it should lurk among some of Mr. Griffith's unexamined collections.

None of the species exceed it in beauty, for, with the large flowers and noble aspect of the "musk" Dendrobium, it is enriched by two large blood red spots on each side of the lip, which melt into a row of fringes turned towards the middle, and looking like a pair of young whiskers fresh from the curling irons of the hairdresser.

It is well figured in Mr. Paxton's Magazine, with a woodcut shewing its manner of growth; and it is there stated to have produced strong stems, upwards of 3 feet in length, without shewing any inclination to flower. The figure was

taken from a plant in the possession of Messrs. Loddiges, and we are indebted to the same gentlemen for our specimen.

Fig. 1. represents a front view of the lip; the fringes, which turn inwards from the purple cheeks, vary a good deal in number and colour, but in general they are deeply stained by the deep purple of the cheeks.

Mr. Gibson states that it flowers at Calcutta in the dry season, as is the natural habit of most, if not all its nearest allies. No doubt it comes from some very hot province of India, and should be treated accordingly. It should be potted in turfy heath-mould mixed with potsherds. Like many other Orchids, it requires an ample supply of water during the growing season, and a humid atmosphere throughout the year. In autumn, as the stems become matured, water should gradually be withheld, so that the plant may be in a state of rest in winter. At this time the temperature should not be raised above 60° by fire heat, unless the house is *well* ventilated, and then a much higher temperature may be applied. In spring, when growth commences, it should be repotted, and heat and moisture gradually increased; 85° by day, and 70° at night, is high enough even at midsummer.

TACSONIA mollissima.

Soft-leaved Tacsonia.

MONADELPHIA *PENTANDRIA.*

Nat. ord. PASSIFLORACEÆ. (PASSIONWORTS. *Vegetable Kingdom, p. 332. ined.*)

TACSONIA. Botanical Register, vol. xviii. *t.* 1536.

T. *mollissima* (Humboldt, Bonpland et Kunth, Nov. Gen. & Sp. Amer. 2. 144. DeCand. Prodr. 4. 334.); foliis tripartitis pubescentibus subtus tomentosis basi cordatis laciniis ovato-lanceolatis serratis, petiolis pluri-glandulosis, stipulis semi-ovatis cuspidato-acuminatis dentatis, pedunculo unifloro, flore glaberrimo, calycis segmentis intus coloratis (roseis), nectario glanduloso ad faucem tubi.—*Hooker in Bot. Mag.* t. 4187

The beauty of the Tacsonia pinnatistipula, figured in this work at t. 1536, has become so well known that every one has been eager to acquire other species bearing the same generic name; and hence the popularity of this "soft-leaved" kind. It is, however, inferior in size, and does not open quite so readily. On the other hand, its colour is more vivid, though not, as far as our observation has gone, nearly so bright as is represented in the Botanical Magazine. It has, moreover, the fault of hanging down so as to conceal what brilliancy it has, and therefore can only be grown where there is room for it to bloom above the eye.

It is called soft-leaved, because its foliage is clothed with a fine soft down, which is sensible to the touch, though not visible to the naked eye. The most singular part of its structure is the row of green glands or warts which stud the purple petiole, and which furnish one of the best means of recognizing the species. Botanists believe these processes to be organs of secretion, and perhaps they are so; but why this soft-leaved Tacsonia should require a dozen for each leaf,

when another species, very nearly allied to it, has none, is what physiologists fail to explain.

Some other Tacsonias are in gardens, partly introduced by Mr. Hartweg. Among them is, we believe, the *T. Quitensis*, a finer species than either *mollissima* or *pinnatistipula*, and if any one should possess a plant with the leaves of the former, but with no hairs on their upper side, and only two or three glands on their stalks, that plant will probably be the T. Quitensis, whose flowers are more than six inches long, and about three inches in diameter.

Our drawing was made in the garden of the Horticultural Society in August last, from a plant raised from seeds collected by Mr. Hartweg in the gardens of Quito.

Like T. pinnatistipula, this is a greenhouse climber, which may either be grown in a pot and trained on trellis, or be planted out in a conservatory border, and trained to a rafter. If potted, the soil ought to be very poor, otherwise a large trellis will soon be covered with wood and leaves without flowers. Where there is convenience, it will succeed best planted out in a bed or border, so that both roots and branches may have plenty of room. An ample supply of water is necessary throughout the year, and air at all times when the weather is favourable. Fire heat should only be applied to keep off frost. It is easily multiplied by cuttings of young wood in the usual way.

LANKESTERIA parviflora.

Small-flowered Lankesteria.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. ACANTHACEÆ. (ACANTHADS, *Veg. King. p.* 678. *ined.*)

LANKESTERIA. Spicæ breves, imbricatæ, axillares. *Calyx* 5-phyllus, æqualis, bibracteatus. *Corolla* tubo gracili, limbo secundo quinquepartito. *Stamina* 2, sterilibus 0, semiexserta; *antheræ* biloculares, muticæ. *Stigma* simplex, capitatum. *Capsula* pedicellata, loculicido-bivalvis, abortu disperma. *Semina* [tenuia] plana, pilis [obscurè spiraliter striatis tecta et] marginata, retinaculis uncinatis subtensa.—*Lindl. in Bot. Reg. Dec.* 1, 1845, *misc. no.* 83.

L. *parviflora;* foliis ovatis obtusiusculis, corollæ tubo calyce haud multùm longiore.—*Lindl. l. c.*

This genus, which was proposed in the last number of the last volume of this work, was named after Dr. Edwin Lankester, F.R.S., a gentleman whose knowledge of botanical science requires no eulogy; it is sufficient to state that he is the author of the Botanical articles in the latter volumes of the Penny Magazine, of various Botanical contributions to periodical publications, and is now engaged in translating into English Schleiden's learned Introduction to Botany.

Lankesteria is a genus of Acanthads, allied to Eranthemum, from which it differs in the absence of sterile stamens, and in the capsule containing but two seeds. Chamæranthemum is distinguished by having four stamens, a nearly equal limb to the corolla, one-celled anthers, and a 4-seeded capsule.

Two species are known: the present, a native of the west coast of Africa, whence it was brought by Mr. Whitfield; and another, with more shaggy branches, sharper pointed leaves, and larger flowers, whose tube is three times as long as the calyx. The latter may be called the long-flowered, and thus defined:

L. *longiflora*; ramulis villosis, foliis obovatis acuminatis undulatis, corollæ tubo calyce triplò longiore.

It is from the latter species, found in Sierra Leone by Mr. George Don, that the character of the fruit and seed has been derived. The latter is very thin, and covered with long coarse hairs, in which the spiral thread occurring in many other Acanthads may be just discovered.

Fig. 1. represents the calyx and lateral bracts of L. parviflora; 2. a section of the tube of its corolla; 3. a capsule and seeds, all magnified.

Our drawing was made in the Nursery of Mr. Glendinning of Turnham Green, from whom we have received the following memorandum concerning the habits of the plant:—

"The present subject does not perhaps equal in beauty some of the plants from Western Africa, already published, but nevertheless it is a pretty and useful winter flowering species, with bright yellow flowers, contrasting well with that valuable old plant Eranthemum pulchellum, with blue flowers. On this account it is more especially desirable, because in the beginning of winter, at which period it flowered in my stove, we have little really to adorn such places. Its cultivation is rather peculiar. I have found it succeed best when treated in the following manner:—shift it in March, but not into too large a pot, using sandy peat with a small portion of loam; place it in a moist temperature in bottom heat, so as it may grow away freely; 75° will be sufficient for it. Towards summer it should be hardened by degrees to endure the temperature of a greenhouse, and in autumn it should be placed in a rather cool stove, where it will continue flowering for some months. The plant is as yet scarce in this country: it is not however difficult to propagate, as it will strike readily by cuttings, in heat under a hand-glass."

Drawn & etched by

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G Barclay.

RUELLIA lilacína.

Lilac-flowered Ruellia.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. ACANTHACEÆ. (ACANTHADS, *Vegetable Kingdom, p.* 678. *ined.*)

RUELLIA, L.—*Calyx* ad basim quinquepartitus, laciniis subæqualibus linearibus apice subdilatatis herbaceis, vel æqualibus acuminatis. *Corolla* infundibuliformis, tubo in limbum anguste campanulatum quinquefidum continue transeunte, laciniis æqualibus obtusis. *Stamina* quatuor, didynama, basi faucium inserta. *Antheræ* oblongæ, bilocellatæ, locellis parallelis contiguis æqualibus muticis vel basi mucronulatis. *Stigma* subulatum, spirale, dorso spongiolosum, canaliculatum, basi denticulo auctum. *Capsula* angusta, quadrangularis, ad basim usque bilocularis, a basi ultra medium sex-octosperma. Dissepimentum completum, adnatum. *Semina* retinaculis mediocribus suffulta.—Inflorescentia:—*spicæ, plerumque in capitulorum formam contractæ, foliaceo-bracteatæ ideoque rudes et parum conspicuæ.* Bracteolæ *nullæ vel angustæ.* Flores *mediocres.* Pleræque herbaceæ sunt et hirsutæ. *Nees v. Esenbeck in Wallich's Plantæ Asiaticæ rariores,* 3. 82.

R. *lilacina;* fruticosa, glabra; caule tetragono, foliis petiolatis ovato-lanceolatis acuminatis subundulatis, spicis pubescentibus longe pedunculatis axillaribus foliis longioribus basi subpaniculatis, floribus solitariis bracteis linearibus squamæformibus, calyce 5-partito piloso, sepalis linearibus, corollæ tubo longissimo cylindraceo curvo in limbum subcampanulatum æqualiter 5-partitum laciniis emarginatis rotundatis abruptè expanso, capsulæ valvis lanceolatis acuminatis divergentibus, seminibus in utroque loculo 6 imbricatis compressis glabris pube marginatis, retinaculis emarginatis.

Ruellia longiflora, *Hort.* nec *Vahlii* nec *Richardi.*
R. lilacina, *Hooker in Bot. Mag. t.* 4147.

Why this gay plant should be called in our gardens *Ruellia longiflora* we have not discovered. It is not the plant of Richard, also called R. cayennensis, which comes from Guiana, and has narrow leaves, longer than the spikes of flowers; neither is it that of Vahl, or at all like it. The name has probably been given at random in the Nurseries.

It has been already figured in the Botanical Magazine, under the name of R. lilacina; but the specimen examined by Sir W. Hooker must have been in a weak unhealthy condition, for its flowers were axillary and sessile; whereas, when the plant is really in a natural state, they are developed in panicled spikes whose stalks are longer than the leaves, as is

shewn in our figure. It is only then that the species acquires its natural beauty.

It is really a charming shrub, and in most respects agrees with the character of the true Ruellias, as limited by Nees v. Esenbeck. But it has six seeds in each half of the capsule, which is more than the learned author admits into his definition; while the corolla in form, and the inflorescence, are also at variance with it. As we have before stated (tab. 7.) we will not attempt to propose changes in a most perplexed genus, the remodelling of which is in better hands.

Fig. 1. shows the form and position of the stamens within the mouth of the corolla.

Our figure was made in October last, in the garden of the Horticultural Society, where it had been received from Mr. Glendinning, who has favoured us with the following communication respecting it:—

"This is one of a large class of stove plants, the treatment of which is not generally in conformity with their natural habits; consequently the beauty which such subjects are capable of attaining under ordinary good treatment, is scarcely ever realized. They first appear in some of our Botanical periodicals, and are then handed over to the back shelf in some neglected house in one or other of our Botanic gardens, or perhaps only to swell the pages of a scientific catalogue.

"The great error in the culture of these plants consists in having them constantly at work, until their constitution is utterly destroyed. By such treatment their system is weakened by keeping them in active motion during winter, instead of allowing them to rest until spring, when they will be in a fit state, and at a proper season, to receive additional stimulus. A mixture of loam, peat, and silver-sand, used in a coarse state, will suit all these kinds of plants well: give them a large shift in this material in a well-drained pot, place them in bottom heat, and maintain a temperature of 75° with a humid atmosphere; when they have arrived at a flowering state, remove them into a rather dryer and cooler house, which will prolong their period of flowering; when the season of flowering is over, gradually withdraw the supplies of water, reduce the temperature to 55°, and keep them in this dormant state until the following spring."

Mus. Drake.

Pub. by J. Ridgway 169 Piccadilly March 1846

J. Bosman

CÚPHEA strigillósa.

Coarse-haired Cuphea.

DODECANDRIA *MONOGYNIA.*

Nat. ord. LYTHRACEÆ. (LOOSESTRIFES, *Vegetable Kingdom, p.* 574. *ined.*)

CUPHEA, Jacq. *Calyx* persistens, tubulosus, tubo basi postice gibbo v. calcarato, nervoso-costato, adscendente, limbo plicato, sæpe ampliato, inæqualiter duodecimdentato, dentibus alternis exterioribus minoribus, interdum obsoletis, interioribus triangularibus, postico sæpe latiore, tubi nervis in dentes medios excurrentibus. *Corolla* rarissime nulla, sæpissime petala 6, summo calycis tubo inserta, ejusdem dentibus minoribus opposita, unguiculata, duo postica plerumque majora, sæpe infra basim glandula aucta. *Stamina* 11, calycis fauci diversa altitudine inserta, inclusa, inæqualia, quorum sex dentibus calycinis exterioribus petalisque opposita, duobus posticis demissius insertis, quinque dentibus majoribus opposita, uno postico deficiente; filamenta brevia, antheræ introrsæ, biloculares, ellipticæ, parvæ, longitudinaliter dehiscentes. *Ovarium* liberum, nunc sessile, ima basi cupula glandulosa cinctum, v. brevissime oblique stipitatum, postice glandula interdum obsoleta stipatum, oblongum, compressum, biloculare, loculis inæqualibus, altero minore sæpe vacuo, dissepimento apice in fila soluto, mox evanido. *Ovula* 2, vel plurima, placentæ filiformi, medio dissepimento adnatæ, funiculis adscendentibus inserta, anatropa. *Stylus* subulatus, incurvus; stigma capitatum, emarginato-bilobum. *Capsula* oblonga, compressiuscula, tenuissime membranacea, calyce cincta, septo obliterato unilocularis, demum hinc fissa, placenta columellari libera. *Semina* pauca v. plurima, lenticulari-complanata, testa coriacea, aptera, umbilico marginali. Embryonis exalbuminosi, orthotropi cotyledones orbiculatæ, radicula brevissima, umbilicum attingens.—Herbæ *v.* suffrutices, *sæpe viscosi, in America tropica indigeni;* foliis *oppositis v. verticillatis, aut interdum simul alternis, integerrimis,* pedunculis *interpetiolaribus, uni- v. rarius multifloris, sæpius cernuis, sæpissime bibracteolatis,* floribus *violaceis, roseis v. albis.*—Endl. gen. no. 6151.

C. *pubiflora;* perennis [fruticosa] caulibus decumbentibus v. suberectis ramosis pubescentibus, foliis breviter petiolatis ovatis v. ovato-lanceolatis acutiusculis basi rotundatis utrinque pubescenti-scaberrimis, pedunculis subbifloris ad apices ramorum subracemosis, calycibus longè et obtusè calcaratis viscoso-pubescentibus ore valdè obliquo, petalis 2 parvis, staminibus 11 exsertis inæqualibus glabris.—*Bentham Plant. Hartweg. p.* 61. *no.* 461.

We received a dried specimen of this little plant at least two years ago, from Mr. Van Houtte of Ghent, under the

name of *C. strigulosa*, Kth.? which has been the origin of its garden appellation. It is, however, not that species, but a Mexican plant found by Mr. Hartweg on the top of the Cumbre, a mountainous ridge between Oaxaca and La Sierra.

It is one of those curious productions in which it would seem as if the work of Nature had stopped before it was finished; for instead of six petals, the customary number in the genus Cuphea, it has invariably only two, and they are stuck on one side only of the calyx, giving the gay orange and scarlet flowers a very singular appearance. These flowers look, moreover, much like those of a Tropæolum, such as tricolorum, formed on the stem of a Lopezia; an odd similarity, which may be recommended to the attention of the ingenious author of the Vestiges of the Natural History of the Creation.

Our drawing was made in October last, in the garden of the Horticultural Society, where the plant is found to be a greenhouse shrub, which grows freely in sandy peat and loam, in equal proportions. Being a plant of free growth, an ample supply of water is necessary during the summer months, and air at all times when the weather is favourable. In winter it should be kept in an airy greenhouse, and supplied with water once or twice a week.

Like many other plants, it requires to be re-potted in spring, and encouraged to make wood for flowering in summer. It will doubtless be easily multiplied from cuttings of young wood, under ordinary treatment.

Miss Drake del.

DENDROBIUM aduncum.

Hooked Dendrobe.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. § MALAXEÆ-DENDROBIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181. *ined.*)

DENDROBIUM, Swartz.

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§ STACHYOBIUM. *Caules teretes. Folia plana. Flores racemosi.*

D. *aduncum* (Wallich); caulibus pendulis, foliis lineari-lanceolatis acutis integris, floribus ternis patentibus, sepalis petalisque ovatis obtusis lateralibus duplò latioribus, cornu rotundato, labello unguiculato ovato concavo apiculato columnæ arctè appresso intus villoso disco glabro, columnà apice bialatâ sub stigmate villosâ, antherâ glandulosâ.—*Lindl. in Bot. Reg.* 1842. *misc.* 62.

Of this very pretty Orchid we know nothing more than that it was sent from Calcutta to Messrs. Loddiges, by Dr. Wallich, and that it flowered at Hackney in July, 1842.

In some respects it is allied to D. Pierardi, especially in its small pink flowers and manner of growth; but it is more closely related to D. moschatum, of which it may be regarded as a feeble imitation. It is however widely different from both, and is especially known by its half transparent flowers, of the most delicate texture and clearest tints. Why it is called D. aduncum, or whence it comes, we know not.

Fig. 1. represents the column, which is remarkable for being hairy just below the stigma, and for having a downy anther; 2. is the lip, stalked, spoon-shaped, sharp pointed, and covered all over the inside with hairs, except a round space in the centre, which answers to the stigma when pressed against it, and which is perfectly smooth; 3. are the pollen-masses.

Like many other Dendrobes, this requires a warm and a humid atmosphere throughout the year. The most convenient, and probably the best way of growing it, is in a pot, in

turfy heath-mould, which may be renewed every year when the plant is at rest, without injuring the roots. In summer an ample supply of water should be given, and as the young leaves are liable to become scorched by the sun, shading should be used in sunny weather. In autumn, as the shoots become matured, water should be gradually withheld, so that for a few weeks in winter the roots may be comparatively dry.

PTEROSTIGMA grandiflorum.

Large-flowered Wingpoint.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. SCROPHULARIACEÆ, (FIGWORTS, *Veg. Kingdom, p.* 681. *ined.*)

PTEROSTIGMA. Calyx quinquepartitus v. quinquefidus, lacinia postica majore. *Corolla* hypogyna, bilabiata, labio superiore emarginato inferiore trilobo. *Stamina* 4, corollæ tubo inserta, postica fertilia, *antheris* biocularibus, loculis disjunctis, stipitatis; antica sterilia v. antheris dimidiatis. *Ovarium* biloculare, placentis medio dissepimento adnatis, multiovulatis. *Stylus* simplex; *stigma* subincrassatum, integrum, sæpius utrinque ala membranacea cinctum. *Capsula* rostrata, bisulca, bilocularis, loculicide bivalvis, valvulis bifidis, dissepimento e marginibus introflexis duplicato, demum libero, placentis adnatis v. tandem solutis. *Semina* plurima, striata.—— Herbæ *indicæ, duræ, villosæ, siccæ sæpius nigrescentes, odore aromatico Labiatarum;* foliis *oppositis, rugosis, crenulatis,* floribus *capitatis, racemosis, sparsis v. inferioribus oppositis,* pedicellis *brevibus, apice sæpius bracteatis.*—Endl. gen. no. 3924.

P. *grandiflorum* (Bentham, Scroph. Ind. p. 21. Hooker and Arnott, Botany of Capt. Beechey's Voyage, p. 204. t. 45. Journal of the Horticultural Society, 1. p. 66); foliis ovatis, corollis amplè tubulosis calyce plus duplo longioribus pollicaribus, floribus racemosis.—*Walpers Repert.* 3. 265.

Gerardia glutinosa, *Linn. sp. pl.* 849.

Digitalis chinensis, *Loureiro fl. cochinch.* (ed. Willd.) 2. 459.?

This is one of the new introductions by the Horticultural Society. It was received from Mr. Fortune, who described it as a blue flowered herbaceous plant growing on hill sides and near streams, on the island of Hong-Kong. It is however only new to our gardens, for it seems to have been one of the earliest species brought in a dried state from China, being common about Macao and the adjacent islands. One of our wild specimens, collected by the Rev. Mr. Vachell in July, 1829, has a close spike of flowers from the axil of every leaf, and if cultivators can get it into that state, it will become very ornamental.

The following account of it is given in the Journal of the Horticultural Society :—

"In its wild state this plant does not appear to grow more than a foot or 18 inches high; but in gardens it has become more than three feet high, the consequence of which is that

its natural beauty has been greatly impaired. It is a perennial, covered all over with slender spreading hairs. The stems are round; the leaves are opposite, stalked, ovate, crenated, very much marked with sunken veins, and deep green. The flowers, which are nearly as large as those of a Digitalis, and of the deep colour of Gloxinia violacea, grow singly in the axils of the leaves, than which they are considerably shorter. Their calyx appears to consist of seven narrow green leaves, imbricated at their base, but the number varies to eight; they form a complete broken whorl, and may be understood to consist in part of bracts which stand close to the true sepals, and become blended with them; of these the three exterior are both broader and longer than the others. The corolla is tubular, two-lipped, with the upper lip broad, ovate, blunt, and notched, while the lower is composed of three smaller divisions placed nearly on the same plane; in this respect however the flower varies, some of the specimens having four lobes in the lower lip. The usual number of stamens is four, of which two are perfect and next the upper lip, and two stunted, of the same length but more slender, and belonging to the lower lip; when an additional lobe appears in the lower lip of the corolla it is accompanied by an additional sterile stamen. The perfect anthers are constructed in an unusual manner; at the end of the filament is a large globular green gland, which eventually shrinks up; upon this green gland are planted two lobes of unequal length, bursting longitudinally. The style and stigma too are of a singular form, the former gradually widening and flattening upwards till it ends in a thin broad plate which curves forward and forms a stigma on its anterior edge."

It has hitherto been treated as a stove plant, but will probably prove hardy enough to stand in a greenhouse. It appears to grow freely in almost any sort of soil, especially sandy peat. In summer shading in sunny weather is necessary. In consequence of its being subject to damp off in winter, it will require to be kept rather dry for a few weeks; and in fact it will probably be found necessary to give it but little water at any time. It will be well too to keep it in small pots, otherwise it becomes all foliage; this is the only probable means of inducing it to flower abundantly.

Its leaves are agreeably sweet-scented.

Fig. 1. represents the section of a monstrous flower; 2. a stamen.

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MULGÉDIUM macrorhízon.

Large-Rooted Mulgede.

SYNGENESIA *POLYGAMIA.*

Nat. ord. ASTERACEÆ, or COMPOSITÆ. (COMPOSITES, *Vegetable Kingdom, p. 702. ined.*)

MULGEDIUM, Cassini.—*Capitulum* multiflorum. *Involucrum* calyculato-imbricatum squamis nempe exterioribus multo brevioribus subimbricatis. *Receptaculum* nudum foveolatum. *Achænia* glabra compressa sæpe utrinque nervata superne attenuata in rostrum cum achænio natura conforme breve crassiusculum apice in discum cupuliforme ciliatum expansum. *Pappus* uni- aut pauciserialis, setis rigidis scabris sordidis aut albis.——Herbæ *Europæ Bor.-Americanæ, rarius Nepalenses erectæ.* Folia *pinnatilobata aut indivisa dentata.* Capitula *racemosa aut paniculata.* Corollæ *cyanicæ nempe cæruleæ aut rarius ex albo cærulescentes aut purpureo-cæruleæ.*—DeCand. Prodr. 247.

§ 2. AGALMA, *DC.*

M. *macrorhizum;* glabrum, radice crassâ perenni, caulibus prostratis, foliis amplexicaulibus pinnatis pinnatifidis sinuatis integrisve laciniis rotundatis dentatis, capitulis pedicellatis subcorymbosis, involucello involucro duplo breviore.

M. macrorhizum, *Royle's Illustrations, t.* 61. *fig.* 1. *DeCand. Prodr.* vii. 251.

This, although its flowers are but those of Succory, is nevertheless a charming perennial, with numerous trailing stems two feet long, and scarcely rising more than a few inches high. For decorating rock-work, it is unsurpassed among autumnal perennials.

It grows willingly in a soil composed of sand, peat, and loam, and is hardy enough to stand the winter in the open border; but its large fleshy roots render it impatient of moisture, and it is frequently destroyed in winter by damp.

It should not only be planted in a very dry situation, but protected either by a hand-glass or dry leaves.

It is easily increased by seeds sown in pots and placed in a cold frame.

It flowers in September and October, and remains for a long while in perfection, trailing over stones or rocks, and covering them with a carpet of lively blue.

It was raised in the garden of the Horticultural Society, from seeds received from Dr. Royle, and stated to have been collected in Cashmere or Thibet.

TRICHOSANTHES colubrina.

The Serpent Cucumber, or Hairblossom.

MONŒCIA *TRIANDRIA.*

Nat. ord. CUCURBITACEÆ. (CUCURBITS, *Vegetable Kingdom, p.* 311.)

TRICHOSANTHES, Linn.—*Flores* monoici v. interdum dioici. *Masc. Calyx* subclavato-campanulatus, quinquefidus. *Corolla* calyci inserta, quinquepartita, laciniis integris v. bifidis, fimbriato-ciliatis. *Stamina* 5, imæ corollæ inserta; *filamenta* triadelpha, *antheræ* coalitæ, extrorsæ, muticæ, loculis longitudinalibus gyroso-flexuosis. *Fem. Calyx* tubo oblongo v. ovato, cum ovario connato, limbo supero, quinquedentato. *Corolla* maris. *Ovarium* inferum, triloculare, placentis juxta septa parietalibus, multiovulatis. *Stylus* trifidus; *stigmata* oblongo-subulata. *Bacca* oblonga vel subglobosa, pulposa, polysperma. *Semina* ovata, compressa, marginibus acuta. *Embryo* . . . . .——Herbæ *annuæ vel perennes, cirrhosæ, in Asia et America tropica crescentes*; foliis *alternis, integris v. palmatilobis,* floribus *masculis racemosis v. rarius solitariis,* femineis *plerumque solitariis, interdum racemosis.* Endl. gen. no. 5140.

Tr. *colubrina* ("Jacq. f. eclog. t. 128." DC. Prodr. 3. 314.); caule sulcato crassiusculo, cirrhis bifidis, foliis cordato-subrotundis indivisis et 3-5-lobatis lobis brevibus latis dentatis integrisque, floribus masculis paniculatis, pedunculo communi longissimo, fœmineis sessilibus solitariis v. cum masculis in eâdem axillâ, calyce longissimo, limbo reflexo, fructu subtereti lineato longissimo contorto rostrato, seminibus obovatis fuscis.

Flores *corymbosi*. Masc. Calyx *infundibularis,* sepalis 5 *ovatis ciliatis reflexis.* Petala 5, *basi connata, ciliata, elongata, lanceolata, multifida, post anthesin involuta.* Stamina 3, filamentis *liberis filiformibus,* antheris *in cylindrum brevem connatis.*——Fœm. Sepala *dentiformia.* Petala *longiora et angustiora decidua.* Ovarium *fusiforme, elongatum, junioris fabricâ omninò* Cucumeris. Stylus *subulatus, lævis, intra tubum calycis inclusus.* Stigma 6-*lobum, laciniis valdè inæqualibus, nunc,* (an semper?) *brevibus, obtusis, per paria recurvis.*

We believe that the sole possessor of this curious plant is Sir John Hay Williams, Bart., of Bodelwyddan, near St. Asaph, to whom we are indebted for a specimen, and the accompanying sketch from the accomplished pencil of Lady Sarah Williams. The seeds had been received from Puerto Caballo, in equatorial America, and under the care of Mr.

Sparrow, the gardener at Bodelwyddan, soon produced young plants.

In growth, the species resembles a cucumber, with leaves ten or twelve inches across, and varying in form from heart-shaped to 3 or 5 lobed. The flowers are white, and beautifully cut into delicate threads, whence the botanical name Trichosanthes, which Sir James Smith translated Hairblossom. The fruits, which hang down from the rafter to which the vines of the plant are trained, resemble serpents, are six feet long, and when unripe, are singularly striped with green and white, which changes to brilliant orange.

We already possess in our gardens an allied species, from the East Indies, called the Snake Cucumber, which differs in having smaller flowers, hispid coarsely toothed leaves and fruit, which is scarcely half the length of this, and is therefore much less remarkable in appearance.

From Mr. Sparrow we have received the following account of his mode of cultivating this plant:

"I sowed the seeds last June in a small pot, and placed them in the Pine-stove, where they vegetated in about a week; and after the plant had attained the height of eighteen inches, I planted one in the pit of the plant-stove, in a compost consisting of two-thirds bog and loam in equal portions, to one-third leaf-mould and sand, where it grew finely, and ripened the first fruit about the middle of November.

"I may mention, that the pit in which I planted it is heated underneath with hot water pipes."

Fig. 1 represents a cluster of male flowers; 2 a seed.

Miss Drake del.

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E. Barclay sc.

SARCOCHÍLUS Calcéolus.

The slippered Fleshlip.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ. § VANDEÆ—SARCANTHIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173.)

SARCOCHILUS.—Supra, fol. 1832.

S. *Calceolus ;* caulescens, radicans, foliis oblongis carnosis obliquè emarginatis obtusis, pedunculis brevibus squamatis bifloris supra-axillaribus, sepalis petalisque carnosis oblongis subæqualibus acutis, labelli lobo medio oblongo tereti solido spongioso laciniis lateralibus ascendentibus triangularibus acuminatis verrucis duabus ciliatis interjectis.

This very singular species is a native of Manilla, whence Mr. Cuming sent it to Messrs. Loddiges, of whose catalogue it is 1554. The lengthened stem is at variance with the usual habit of Sarcochilus, as also is the lip so far as the very large size of its middle lobe is concerned. But no other distinctions appear to exist. The resemblance of the lip to a slipper is too obvious to require being pointed out; it is, however, but a false resemblance after all, for it has no hole for the foot, being solid and spongy, and in reality closed up by a pair of little ciliated warts. (See Fig. 1.) Fig. 2 represents the column, and 3 the pollen-masses.

The following is a list of the species of this genus at present known.

1. S. *falcatus* (R. Brown Prodr. 332. Lindl. gen. & sp. orch. 842. Bot. Register, t. 1832); acaulis, foliis oblongo-lanceolatis acutis, racemo laxo multifloro foliorum longitudine, labelli lobo medio obsoleto rotundato lateralibus oblongis ascendentibus petaloideis. —— *New Holland* ——Flowers white with a few pink streaks on the lip, whose middle lobe is yellow.

2. S. *parviflorus* (Lindl. in Bot. Reg. 1838. misc. 50); acaulis, foliis oblongis undulatis chartaceis apice acute et oblique bidentatis, racemis nutantibus quadrifloris, sepalis lineari-obovatis acutis lateralibus basi dilatatis, petalis falcatis obtusis, labelli cum columnâ articulati lobo medio minimo transverso rotundato: disco callis variis crassis rotundatis tuberculato.——*New Holland.*——Flowers small, green, with a few spots of dull purple on the sepals. The

lip is less green, beneath nearly white, banded with dull purple, articulated with the column, and covered over in the inside with various crowded tubercles, of which the three largest form a crescent near the apex of the lip.

3. S. *olivaceus* (A. Cunn. in Bot. Reg, 1839. misc. no. 27); foliis oblongis membranaceis falcatis apice acutis integris, racemo flexuoso angulato 4-5-floro nutante, sepalis linearibus obovatis obtusis: intermedio latiore petalisque conformibus minoribus columnæ dorso adnatis, labelli cum columnâ productâ articulati lobo medio minimo transverso rotundato lateralibus acuminatis; disco callis variis crassis rotundatis tuberculato.——*New Holland* ——Very nearly the same as S. *parviflorus*, from which it principally differs in its leaves being broader and not emarginate at the point. The flowers are small, yellowish orange green.

4. S. *croceus*; foliis crassis dorso rotundatis recurvis apice in acumen crassum carnosum constrictis, labelli lunati laciniis semioblongis acutis antice convexis disco pubescentibus lobulo intermedio obsoleto.——*Manilla* —— Of this I have only seen one leaf, and one flower-bud, from Mr. Loddiges. It is a thick-leaved Vanda-like plant, with a saffron-coloured spot in the middle of its lip, which when spread out is not unlike a cheese-cutter in form.

5. S. *unguiculatus* (Lindl. in Bot. Reg. 1840. misc. 143); racemo 3-4-floro, labelli unguiculati trilobi ungue convexo lineari lineâ mediâ exaratâ, laminâ cavâ, lobis lateralibus semi-ovatis obtusis intermedio supra trinervi subtus globoso apice papillæformi.—— *Manilla.*—— The flowers are light straw-colour, the side lobes of the labellum white streaked with crimson, and the middle lobe rounded, fleshy, and dotted with crimson. It is rather a pretty species.

6. S. *Calceolus, supra.*

Like many species of exotic Orchids this requires a humid atmosphere, and an ample supply of water throughout the year. It may be potted in turfy heath mould in the usual way. Being a native of a hot climate, it is necessary to keep it in a temperature of about 80° in summer, using a thin shading in sunny weather. In winter a temperature ranging from 66° to 70° will be sufficient.

Miss Drake del.

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SILÉNE Schafta.

The Schafta.

DECANDRIA *TRIGYNIA*.

Nat. ord. CARYOPHYLLACEÆ. (CLOVE-WORTS, *Vegetable Kingdom*, *p.* 496.)

SILENE, L.—Supra, vol. 3. *t.* 247.

S. *Schafta ;* radice lignosâ multicauli, caulibus ascendentibus simplicissimis, pedunculis 1-2-floris, foliis obovatis acutis, floribus erectis, calyce longissimo clavato dentibus ovatis obtusiusculis, petalis cuneatis denticulatis fauce squamatis, capsulâ glabrâ stipiti suo subæquali, seminibus squamulis lanceolatis echinatis.

S. Schafta, *S. G. Gmelin. Hohenacker in Bulletin de la Société Imperiale des Naturalistes de Moscow,* xii. 397. *Walpers' Repertorium,* 1. 276. *Lindley in Journal of the Horticultural Society, vol.* 1. *p.* 69. *with a figure.*

It is seldom that so charming a recruit as this can be added to our hardy herbaceous species, for without any exception it is one of the prettiest of all border and rock plants. In the Journal of the Horticultural Society, where a woodcut shews its natural manner of growth, it is thus spoken of:

"This proves to be a beautiful little herbaceous plant, producing a great number of spreading slender downy stems, which form compact tufts, and are terminated near the extremity by 4 or 5 bright purple flowers more than an inch long. Of these flowers, that at the extremity of the shoot opens first, and those below it one after the other in succession, so that the branches are by degrees covered all over with blossoms. Its stems do not rise above six inches high, and render it well suited for bedding out, or for cultivating among collections of alpines, or for rock-work, over which it will bend gracefully.

"It is a hardy perennial, which grows freely in any light rich soil. It is increased by seeds, which are produced freely, and flowers from the end of June to October: the

young plants from seed will not bloom before the second season.

"This species must be regarded as a very handsome little plant, and very desirable on account of its blooming profusely, and for a long time in the autumn."

The society received it from Dr. Fischer, who obtained it from the Botanic Garden at Dorpat, and it has also found its way hither through France.

Dr. Hohenacker, who first published an account of it in the Proceedings of the Imperial Natural History Society of Moscow for 1838, calls it S. Schafta of S. G. Gmelin; but he does not explain the meaning of the name, which we presume to be its country appellation. He states, however, that it grows naturally in rocky places, on a mountain called Keridach, in the district of Suwant, in the Russian province of Talysch, at the height of from 2500 to 4000 feet, flowering in October. He says that it might be mistaken for a variety of S. depressa, but its capsule is much larger, and its seeds covered with little spines instead of tubercles; and he also compares it with S. Vallesia, and humilis, of which the first has a downy capsule, and the last obscurely granulated seeds.

Publ. by T. Hodgetts 1869

SCHUBERTIA gravéolens.

Strong-scented Schubertia.

PENTANDRIA *DIGYNIA*.

Nat. ord. ASCLEPIADACEÆ. (ASCLEPIADS, *Vegetable Kingdom*, *p.* 623.)

SCHUBERTIA, Mart.—*Calyx* alte quinquepartitus, sepalis magnis erecto-patentibus. *Corolla* infundibuliformis; tubus basi globoso-pentagonus, sursum constrictus cylindricus; laciniæ lineares v. lanceolatæ, horizontaliter patentes; *squamulæ* quinque carnosæ tubo introrsum decurrentes, ima basi gynostegium brevem confusæ. *Antheræ* membrana brevi terminatæ. *Massæ pollinis* obovatæ, compressiusculæ, pendulæ. *Stigma* turbinatum, vertice convexo-planum, brevissime biumbonatum. *Folliculi* . . . . .—— Frutices *Americani volubiles, hirsuti, lactescentes;* folia *opposita;* flores *umbellati speciosi, subcarnosi, introrsum sæpius barbati.*—Decaisne in DC. Prodr. 8. 535.

S. *graveolens;* caule villoso, foliis cordatis obovatis obtusis acuminatisque molliter pubescentibus suprà lucidis, umbellâ 6-7-florâ pilosâ pedunculo petiolis multò longiore, corollæ tubo intus nudo lacinias limbi ovatas æquante.

S. graveolens, *Lindl. in Bot. Reg.* 1838. *misc. no.* 2. *Decaisne in DC. Prodr.* viii. 535.

Physianthus auricomus, *Graham in Bot. Mag. t.* 3891. *August,* 1841.

S. auricoma, *Decaisne, l. c.*

This plant was first published in the present work, in January 1838, under the name of S. *graveolens*, from a small specimen of the end of a branch furnished by the Messrs. Hendersons, of Pine-Apple Place, and it received its specific name in consequence of its flowers having a strong but not unpleasant odour, which, in the summer, becomes even agreeable. Lady Wilton had procured it from Brazil.

Afterwards, in August 1841, Dr. Graham having found it growing in Mr. Blackburn's garden at Hales, near Liverpool, mistook it for a Physianthus (or Arauja) and published an account of it in the Botanical Magazine, calling it auricomus or the golden-haired, in allusion to the long brown hairs which clothe it. Had he perceived that it was in reality a Schubertia, he would probably have recognized it in our S. *graveolens*, notwithstanding that its leaves were described

as obtuse, not acuminate: it being the nature of this plant to vary in the form of the leaves, of which we were not aware, when the species was first named.

The accompanying figure was made in November last, in the nursery of Mr. Glendinning, of Turnham Green, from whom we have the following memorandum of its habits, and of the cultivation it requires.

"When Stephanotis floribunda made its appearance it was generally considered, and justly, the finest twining plant in cultivation. The present subject is not inferior to it under good culture. The flowers are rather larger, and quite as fragrant; they are likewise produced in great profusion. The plant which was exhibited by me before the Horticultural Society last autumn, and awarded a Banksian medal, remained in bloom quite four months; thus rendering it a most useful and desirable plant at a season peculiarly distinguished by paucity of flower.

"I have found the following treatment in its cultivation suitable to it. When the flowers begin to fade, it should be allowed quietly to go into a state of repose, when it will almost become deciduous. Early in March it should be shaken out of the pot, the soil cleared entirely away from the roots, and repotted in rough peaty soil with a little turfy loam, adding a small portion of sand; these should be intermixed. Select pots of rather large dimensions, as it delights in root-room; well drain the pots, and spread the roots out amongst the soil when potting it. Settle the whole down with a good watering. Then place it in a close stove or pit, in a temperature of 75°; and if plunged in bottom heat, success will be more rapid and certain. Few plants will more satisfactorily repay the trouble and attention thus bestowed upon it; and if trained in the same manner as Stephanotis, it will begin to bloom freely about the end of August."

INDIGÓFERA decóra.

The comely Indigo.

DIADELPHIA *DECANDRIA.*

Nat. ord. FABACEÆ. (LEGUMINOUS PLANTS, *Vegetable Kingdom, p.* 544.)

INDIGOFERA. L.

I. *decora;* fruticosa, glabra, glaucescens, foliis pinnatis, petiolis 2-5-jugis exactè ovatis obtusis c. mucrone subtus pilis sparsis peltatis obsitis, racemis densis foliis duplò brevioribus, calyce plano membranaceo 5-dentato, vexillo oblongo, carinæ margine superiore villoso.—*Lindley in Journal of Horticultural Society, vol.* 1. *p.* 68.

This is a very pretty bush, received by the Horticultural Society from Mr. Fortune, who found it cultivated in the nursery gardens at Shanghai, and calls it a dwarf shrub. The climate of Shanghai is so cold in winter, that it may be a question whether this species may not prove hardy: but at present it is too rare to be made the subject of experiments. It is thus described in the Journal of the Horticultural Society:—

"A dark-green handsome bush, with somewhat glaucous branches. The leaves are pinnate in from two to five pairs and an odd one, quite smooth on the upper side, but slightly covered on the under side with very fine hairs, attached by their middle; the leaflets are exactly ovate, with a short bristle at their end, between one and a half and two inches long, of a very dark green colour; and to each pair there are two short bristle-like stipules. The flowers grow from the axils of the leaves in horizontal racemes much shorter than the leaves themselves; they are of a light rose colour and very handsome. The calyx is a flat membranous five-toothed cup, with the two upper teeth very far apart. The standard of the corolla is oblong, nearly flat, very slightly keeled behind, nearly white, but pencilled with delicate crimson lines

near the base; in length it is equal to the wings and keel, and forms with them an angle of about 45° when expanded; the wings are narrowly lanceolate and ciliated, of a pale bright rose colour; the keel is rather paler, and bordered with a woolly or very downy upper edge.

"It is a greenhouse plant which will grow freely in almost any sort of soil, especially sandy peat. In summer an ample supply of water is required, and air at all times when the weather is favourable. To prevent the leaves from being scorched by the sun, it will be necessary to use shading. In winter water should only be given when the soil becomes dry. It strikes freely from cuttings under ordinary treatment."

Miss Drake del.

Barclay sc.

Pub. by [illegible]

PLUMBAGO zeylánica.

Ceylon Leadwort.

PENTANDRIA *MONOGYNIA.*

Nat. ord. PLUMBAGINACEÆ. (LEADWORTS, *Vegetable Kingdom, p.* 640.)

PLUMBAGO, L.—Supra, vol. 5. *t.* 417.

P. *zeylanica ;* foliis ovatis acutissimis in petiolum angustatis subtus caulibusque minutissimè lepidotis, spicis brevibus densifloris, bracteis ovatis acutis squarrosis, corollæ tubo calyce duplò longiore, limbo tubo breviore laciniis retusis.

P. zeylanica, *Linn. sp. pl.* 1. *& omnium auctorum.*

Among the few plants which have reached this country from Affghanistan is the present, of which seeds from Jellalabad were given to the Horticultural Society by Sir Henry Fletcher. Not knowing what it was, the specimens in the garden of the Society were treated as half-hardy shrubs, and led to twine round a trellis ; they appeared to be little impatient of cold short of frost, and on flowering in September last proved to be a mere form of the Ceylon Leadwort, the usual appearance of which was lost in consequence of the leaves having become much more wavy, and darker coloured, and the growth of the plant much restricted in consequence of the low temperature to which it had been subjected.

The experiment proved, however, that this species is by no means a stove plant, as it is generally supposed to be ; but that it may be grown perfectly well, provided actual frost is guarded against.

There are few species indeed which have a more extensive geographical range than this. Dr. Royle states that it occurs in the plains of India as far as 30° north latitude ; we have it now before us from Madras, Burma, Ceylon, and Timor ; and Dr. Brown found it as far to the southward as Port Jackson in New Holland. In none of the instances that have

come under our observation is there any difference of the least moment in the forms which the plant assumes in so many different climates.

Its clear white flowers are pretty enough to make it worth cultivation among greenhouse twiners: but it is chiefly interesting on account of its medical qualities. The fresh roots, when bruised, act as a severe blistering application. Dr. Royle informs us that the natives of Northern India call it by "all the names of fire"; and in the West Indies *Plumbago scandens*, which is scarcely different as a species, is named in the French islands *Herbe du Diable*.

1846

MUSSÆNDA macrophylla.

The large-leaved Mussænda.

PENTANDRIA *MONOGYNIA*.

Nat. ord. CINCHONACEÆ. (CINCHONADS, *Vegetable Kingdom, p.* 761.)

MUSSÆNDA, Linn.—Supra, vol. vi. *fol.* 517.

Sect. BELILLA, *DC.*

One lobe of the calyx extended into a large stalked leaf with notted veins and the appearance of a bract.

M. *macrophylla* (Wallich in Roxb. Fl. Ind. 2. p. 228); ràmulis sericeo-pilosis, foliis ovatis acuminatis pubescentibus, stipulis lato-ovatis bifidis apice acuminatis recurvis, corymbis terminalibus trichotomis pilosissimis brevè pedunculatis, calycis laciniis foliaceis latis oblongo-lanceolatis, bracteis amplis pilosissimis.—*DC. Prodr.* iv. 371.

Dr. Wallich gives the following account of this plant:—"I have found this noble species on the mountains of Chundragiri and Nagarjoon in Nipal, in blossom during the rainy season, in fruit during the winter."

"A large spreading shrub, generally erect, though sometimes, when growing in a very rich soil, tending to ramble. *Branches* 4-cornered, brown; while young almost round, densely beset with soft and silky, long and spreading grayish hairs. *Leaves* broad-ovate, from 8 to 10 inches long, spreading, acuminate, with entire and even margins; the uppermost roundish and sub-retuse at the base, and almost sessile, the rest acute, pubescent, slightly rugose, of a dark green colour above, pale, villous underneath, with elevated rib, and parallel, oblique, approximate nerves, which unite in sub-marginal arches. *Petiols* thick, channelled, sub-marginate, half an inch long.—*Stipules* large, ovate, tapering acute or bifid, with recurved apices, nearly twice as long as the petiols, hairy within the base; there are a number of small, subulate, black glands loosely attached to the inner surface. *Corymb* terminal, spreading, many flowered, shorter than the upper-

most pair of leaves, sessile, very hairy, trichotomous. *Divisions* short, round, the lowermost about an inch long. There are generally three *floral leaves*, broad-oval, acuminate, seven-nerved somewhat villous, very thin and membranous, snow-white, with faintly green veins, two or three inches long, on slender elongated petioles, inserted laterally into the apex of the ovarium. *Bracts* numerous, large, very hairy, opposite or solitary, under each division of the inflorescence, deeply divided into 2 or 3 lanceolate, acuminate lobes, half an inch long or more. *Flowers* large, orange-coloured, nearly sessile, hairy without. *Calyx* large, divided into 5 foliaceous, oblong-lanceolate, acuminate, entire segments; within the base there are a number of small subulate glands. *Tube* of the corolla greenish, an inch and a half long, a little swelled above the middle, nearly three times longer than the calyx. *Limb* spreading, convex, divided into 5 ovate, cuspidato-acuminate *laciniæ*; throat and upper part of the tube above the anthers filled with silky, yellowish, straight hairs. *Stamina* enclosed. *Ovarium* ovate, with a small bractlet or two at the base. *Stigma* below the anthers, divided into two linear, fleshy lobes. *Berries* dark purple, hairy, as large as a marrow-fat pea."

In cultivation it is found to be a stove shrub which requires to be potted in loam and rough sandy peat in equal proportions, and, it being a plant of free growth, plenty of pot-room. During summer, water should be given to its roots in abundance, and it should be syringed over head once or twice a day. Few plants enjoy a damp warm atmosphere more than this.

Like other plants it requires a season of rest, and therefore must be kept rather dry during winter, for if allowed to continue growing it will ultimately become feeble. It is multiplied by cuttings of young wood, treated in the usual way.

The plant, from which the accompanying drawing was made, had been presented to the Garden of the Horticultural Society by Messrs. Knight and Perry, Nurserymen in the King's Road.

SOLANUM lycioides.

Lycium-like Solanum.

PENTANDRIA *MONOGYNIA*.

Nat. ord. SOLANACEÆ. (NIGHTSHADES, *Vegetable Kingdom*, *p.* 618.)
SOLANUM.—L.

Division I. UNARMED: *i. e.* without prickles.

Section 5. *Lycioides*, Dunal.—*Branches* spiny. *Leaves* solitary, undivided. *Peduncles* axillary, filiform, one-flowered, solitary or clustered. *Calyx* 5-toothed or 5-cleft. *Stamens* unequal. *Seeds* bony.

S. *lycioides;* caule fruticoso, ramis spinescentibus, foliis lanceolatis petiolatis glabris nunc subobovatis, pedunculis filiformibus solitariis et aggregatis unifloris.

S. lycioides, *Linn. Mant. p.* 45. *Jacq. ic. rar.* 1. *t.* 46. *Dunal Monogr. Sol. p.* 174.

This charming shrub was found by Mr. Hartweg, in the valley of San Antonio, in Peru, and flowered in the Garden of the Horticultural Society, in Nov. 1845. It has a neat habit; the flowers are of the richest sapphire purple, enlivened by a bright yellow eye, and in the wild state appear in clusters, so as to load the little spiny branches. The name is a happy one, for in its natural state (as in No. 1302 of Mr. Hartweg's Herbarium), it is very much like a dwarf Lycium barbarum.

In cultivation, however, it loses some of its stiff spiny habit, and has hitherto not yielded flowers in clusters; but they are larger than in the wild state.

It is by no means new to Europe, for it was represented in Jacquin's Figures of Rare Plants, above sixty years since; but it has disappeared from the gardens of this country. So very poor, pale-blue, a variety was indeed at that time possessed, that it hardly deserved to be preserved even in a botanic garden.

It is found to be a greenhouse plant, which appears to succeed in almost any sort of soil, but to prefer sandy loam,

mixed with a little rough peat. To flower it well, it seems necessary to place it out of doors during summer, in some exposed situation where it can remain till the end of September. By that time the flower buds will be formed, and they expand in a short time after the plant is taken in doors. It is easily propagated from cuttings, and must be regarded as a good addition to our autumn flowering greenhouse shrubs.

Miss Drake del.

Pub. by J. Ridgway 169 Piccadilly May 1 1846

J. Bartlett sc.

FAGOPŸRUM cymōsum.

Loose-flowered Buckwheat.

OCTANDRIA *TRIGYNIA.*

Nat. ord. POLYGONACEÆ. (BUCKWHEATS, *Vegetable Kingdom, p.* 503.)

FAGOPYRUM, Gærtner.—Flores hermaphroditi aut (abortu) diclini. ***Calyx*** corollinus profundè 5-fidus, laciniis æqualibus post anthesin marcescens nec auctus, achenio maturo brevior. ***Glandulæ*** hypogynæ 8, hemisphæricæ, sessiles, cum staminibus alternantes. ***Stamina*** 8. ***Antheræ*** versatiles. ***Styli*** 3 longi. ***Stigmata*** integra, capitata, parva. ***Achenium*** triquetrum magnum. ***Semen*** liberum. ***Albumen*** farinosum bipartitum. ***Embryo*** centralis: ***Cotyledones*** contortuplicatæ, ***albumen*** partim involventes, latæ, palmatinerviæ. —— Herbæ; foliis ***cordato-hastatis.***—Meisner in Wallich's Plantæ Asiat. rariores, v. 3. p. 63.

F. ***cymosum;*** paniculis longè pedunculatis subaphyllis dichotomis trifidisvè, racemis conjugatis subconfluentibus divaricatis subrecurvis, achenio maturo calyce plùs dimidiò longiore, angulis acutis integris, faciebus ovato-rhombeis apicem versus attenuatis, foliis inferioribus cordato-triangularibus hastatisvè lobis obtusiusculis, supremis oblongo v. lanceolato-sagittatis, caule orgyali annuo, radicibus perennibus stoloniferis.—*Meisner, l. c.*

Polygonum cymosum, *Treviranus delect. sem. Vratisl.* 1824. *Reichb. ic. exot. cent.* 2. *p.* 29. *tab.* 176.

P. acutatum, *Lehm. cat. sem. Hamburg.* 1820.

This plant was sent to the Horticultural Society by Captain Munro, as a species of Fagopyrum from Chinese Tartary. It is certainly the plant strangely called *Polygonum cymosum* by Treviranus, for it has no cymes. It would have been better to have taken Lehmann's name of *acutatum*, but we are unwilling to disturb the existing terminology.

It is a hardy perennial of the easiest culture, growing freely in any common garden soil, and increased either by seeds or dividing the roots. It flowers the first season from seed, and is well worth cultivating as an annual, for it blooms freely from July to September, and grows from 1 to 1½ foot

in height, forming a rather spreading bush. Like other Buckwheats it is a favourite resort of Bees.

It is so much like the Fagopyrum triangulare of Nepal, that it may be easily mistaken for it. But that species has a regularly forked inflorescence, the arms of which are longer and more slender, and never in threes as far as we can perceive. The fruit too of P. triangulare is said to be blunt edged instead of sharp edged.

It is impossible not to be struck with the great resemblance between the inflorescence of these two Buckwheats, and that of many species of Sea Lavender (Statice); and we are inclined to believe that this indicates an unsuspected relation between Leadworts (Plumbaginaceæ) and Buckwheats, and consequently between the Cortusal and Silenal Alliances. (*See Vegetable Kingdom, pp.* 495 *and* 637). If we compare Statice with Fagopyrum, we find in both cases a central free one-seeded placenta, a superior radicle, a one-celled fruit made up of several valvate carpels; and again in Glaux we have a Primwort (*Primulacea*) absolutely apetalous, with the coloured calyx and æstivation of a Polygonum. If this view of the question should be correct, it will enable us to bring the Hypogynous and Perigynous subclasses of Exogens into a closer parallelism than ever, and will confirm the propriety of not allowing the monopetalous structure any higher value than what may be taken as a useful but mere characteristic of a Natural order.

Miss Drake del.

Pub by J Ridgway 169 Piccadilly May 1 1846

G. Barclay sc

ONCIDIUM lacĕrum.

Cut-lipped Oncidium.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173.)

Sect. TERETIFOLIA : Chive-leaved.

O. *lacerum* (Lindl. in Bot. Reg. 1844. misc. 38) ; foliis longis teretibus carinatis, paniculâ contractâ multiflorâ, sepalis petalisque conformibus obovatis concavis, labelli elongati laciniis lateralibus linearibus refractis intermediâ longè et angustè unguiculatâ bilobâ margine lacerâ, cristæ dente altero transverso altero majore compresso a fronte, columnæ brevis pubescentis alis semiovatis.

Among the species of Oncidium, to which the general term of Chive-leaved may be given, and the type of which is *O. Cebolleta*, this, and *O. longifolium*, are the handsomest. It agrees with that species in the length of its leaves, which are as much as two feet, but it differs in having a smaller panicle, sharp column-wings, very narrow falcate side lobes on the lip, and a single-ridged tubercle at the base of that organ, placed at right angles to a flat somewhat concave swelling, which almost connects the side lobes.

Oncidium nudum, a Caraccas plant, has much smaller flowers, little blunt column wings, a crenate crescent-shaped ridge in front of its column, with the convexity outwards, and a very small raised line at right angles to it.

This species is found wild in Panama, whence it was sent to Messrs. Loddiges, with whom it flowered in April, 1844. Fig. 1 represents the column and base of the lip.

Like the generality of Orchids, this requires to be potted in turfy heath-mould, mixed with potsherds, and to be kept in a humid atmosphere throughout the year. Being one of those which are not easily injured by the sun's rays, shading is only necessary to keep the temperature about 80°, without admitting cold air. In winter, very little water will be re-

quired, except in the form of vapour, nor should the temperature be raised above 66° by artificial means.

Although such plants do not derive much nourishment from the soil, still they are greatly benefited by being repotted once a year. This should be done in winter, or early in the spring, so as not to injure the roots while in a growing state.

Miss Drake del.

OXYRAMPHIS macrostyla.

Long-styled Oxyramph.

DIADELPHIA *DECANDRIA*.

Nat. ord. FABACEÆ. (LEGUMINOUS PLANTS, *Vegetable Kingdom*, *p.* 544.)

Suborder I. PAPILIONACEÆ.

Tribe 4. HEDYSAREÆ, *Benth.*

OXYRAMPHIS, *Wallich.*—*Calyx* profundè bilabiatus, labio superiore bidentato, inferiore tripartito, laciniis omnibus acutis. *Corollæ* papilionaceæ petala subæquilonga, *vexillum* apice attenuato-acuminatum, plicatum, *carina* rostrata. *Stamina* 10, filamento vexillari libero diadelpha. *Ovarium* brevissime stipitatum, compressum, elliptico-rhomboideum, utrinque angustatum, uniovulatum (?). *Stylus* longus, basi hirsutus; stigma minute capitatum. *Legumen* ovatum, compressum, villosissimum, monospermum.——Frutex *nepalensis*; foliis *obovatis, retusis, coriaceis, mucronulatis, subtus ramulisque sericeo-villosis*, racemis *axillaribus, brevibus*.—Endlicher Genera Plantarum, no. 6531.

O. *macrostyla*; foliis 3-foliolatis, foliolis obovatis retusis coriaceis mucronulatis subtus ramulisque sericeo-villosis, racemis axillaribus, leguminibus ovatis compressis monospermis villosissimis.—*DeCand. Prodr.* 2. 135. *sub* Crotalaria macrostyla.

Oxyramphis macrostyla, *Wall. Cat.* 5348. *Walpers' Repert.* 1. 672.

Among the doubtful Crotalarias of DeCandolle's prodromus was one, taken up from Don, which was called C. macrostyla, and described with diadelphous stamens, and a long feathery style. That plant Dr. Wallich afterwards separated under the name of Oxyramphis, so called from *οξυς* sharp-pointed, and *ραμφος* a beak. It is one of the species of which we have seen no specimens, but the description so much resembles the shrub before us, that we presume them to be the same, although we are unacquainted with the fruit. It may, however, possibly belong to the genus Campylotropis, which is equally unknown to us.

Fig. 1 represents the more essential parts of the flower after the corolla is removed.

It is a very pretty greenhouse shrub, which flowers in

October and November, and grows freely in sandy loam and peat. It rises to the height of four or five feet, and loses its leaves in the winter, at which time it should be allowed to sink to rest. Its flowers, half crimson and half rose-coloured, are very pretty, and appear in short close racemes from every axil. The leaves are much like those of some Tephrosia.

It was sent from the Botanic Garden Saharunpur, in August 1837, by Dr. Falconer, and flowered in the collection of the Horticultural Society in Ootober, 1845.

Miss Bradee del.

Pubd. by S. Highley 169 Piccadilly May 1. 1846

CEDRONELLA pallĭda.

The Pale Cedronel.

DIDYNAMIA *GYMNOSPERMIA*.

Nat. ord. LAMIACEÆ. (LABIATES, *Vegetable Kingdom*, *p.* 659.)

CEDRONELLA, Mœnch.—*Calyx* tubulosus vel campanulatus, sub-15-nervius, ore subæquali vel obliquo, 5-dentato. *Corolla* tubo exserto, intus nuda, fauce dilatata, limbo bilabiato, labio superiore recto subplano emarginato-bifido, inferiore trifido, lobo medio maximo. *Stamina* 4, adscendentia, didynama, inferioribus brevioribus. *Antheræ* biloculares, loculis parallelis. *Stylus* apice subæqualiter bifidus, lobis subulatis apice stigmatiferis. *Achenia* sicca, lævia.——Herbæ. Verticillastri *in spica vel racemo terminali approximati*. Folia *floralia bracteæformia*. Bracteæ *parvæ*, *setaceæ*.—Benth. Lab. 501.

C. *pallida*; foliis omnibus cordato-ovatis petiolatis obtusis crenatis subtus pubescentibus obsoletè foveatis, verticillastris nudis spicatis, corollæ tubo calyce parum longiore laciniis omnibus rotundatis.

Mr. Bentham has pointed out to us that the Gardoquia betonicoides, mentioned in this work for 1838, No. 159 of the miscellaneous matter, is probably the Cedronella mexicana, as is certainly the plant figured under the former name in the Botanical Magazine, t. 3860; and upon reference to the original specimen, we are able to confirm this conjecture. This species, therefore, which has also fifteen veins in its calyx, and the back pair of stamens longest, will also belong to Cedronella, although it is distinct from C. mexicana.

Like that plant, it is a native of the North of Mexico, whence the seeds were obtained by Frederick Scheer, Esq., who gave them to the Horticultural Society, in whose garden the flowers were produced in October last. It is, however, very inferior in point of beauty, its blossoms being a pale dull red, instead of a rich purplish crimson.

As a species, it is known by its leaves being invariably blunt, and somewhat heart-shaped, even next the inflorescence, by their undersurface being so closely covered with very fine down, that the little pits, or secreting cavities, are concealed, by the tube of the corolla being very little longer than the calyx, and

its lobes being rounded. In Cedronella mexicana, on the contrary, the leaves are usually acuminate, those next the flowers are wedge-shaped at the base; their under surface, not being downy, is covered all over with little open pits; the tube of the corolla is much longer than the calyx, and its lobes are acute.

Hitherto it has been treated as a greenhouse plant, but it may prove hardy enough for bedding out in a flower garden in summer. If so, and as it appears to grow freely in any light sandy soil, it will be of considerable use in the flower garden; and even if it is only a greenhouse plant, it is pretty enough to be worth growing.

ANSELLIA africana.

African Ansellia.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ—§ VANDEÆ-BRASSIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173.)

ANSELLIA, Lindl.—*Sepala* oblonga, carnosa, æqui-patentia, libera. *Petala* conformia, recta, patula, duplò latiora. *Labellum* sessile, patulum, trilobum, bilamellatum, lobo medio minore verrucoso. *Columna* elongata, marginata, basi utrinque auriculata. *Anthera* bilocularis. *Pollinia* 4, sessilia, basi contigua, duobus dorsalibus multo minoribus; glandula angusta utrinque acuminata.——Caulis *elongatus, teres, apice tantum foliosus.* Folia *plicata, coriacea.* Panicula *terminalis.*—Lindl. in Bot. Reg. 1844, sub t. 12.

A. *africana*, Lindl. l. c.

The noble plant now figured was spoken of by us in 1844 in the following terms:

"While we are writing on this subject, we would also mention another most noble plant, specimens of which might certainly be procured by any of our African merchants. When Mr. Ansell was ill from the effects of the Niger expedition, at Fernando Po, he found in Clarence Cove, growing on the stems of the Oil Palm (Elais guineensis), an epiphyte with a slender jointed stem about two feet long, having at the upper end many stiff, plaited, lanceolate, 5-ribbed leaves, and a terminal panicle of flowers as large as those of Vanda Roxburghii, with dark purple spots on a pale ground. Of that plant we possess a dried specimen, with one of the lower branches of the panicle in good preservation, and as it proves to be a new genus we take this opportunity of naming it after its discoverer."

This notice produced the desired effect, living specimens having been received by the Rev. John Clowes, and by Messrs. Loddiges, from the latter of whom the specimen which supplied the accompanying drawing was exhibited to the Horticultural Society, in Regent Street, in February last.

The plant was about two feet high, and bore twenty-four flowers. We understand that Mr. Clowes's specimen was much finer.

It is indeed a noble thing; for although its flowers have somewhat the colour and appearance of a large Cymbid, yet their panicled disposition, and the entirely different habit of the plant, render it much more showy than any Cymbid known to us. Its nearest affinity is perhaps with Bromheadia, with which it corresponds in having a lengthened stem and terminal inflorescence; and thus it may serve as a connecting link between the Brassid forms of Indian and African Orchids, and as a transition to the Indian Sarcanthids by way of Eulophia or Galeandra. It is very near Cymbidium in technical characters, though so extremely different in its manner of growth. The auricles at the base of the column, the four pollen-masses, and the very narrow gland fining away to each side, sufficiently distinguish it.

Although it is stated that this plant was found growing on the stems of the Oil Palm, yet under cultivation it will in all probability succeed best in a pot if treated in a similar way to Peristeria elata. It roots freely in turfy heath-mould, and requires an ample supply of water during the growing season. In winter it may be supposed that a season of rest is necessary, when little or no water should be given; a damp atmosphere being sufficient for all the requirements of the plant.

Miss Drake del.

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PRIMULA involucráta.

The ruffed Primrose.

PENTANDRIA *MONOGYNIA.*

Nat. ord. PRIMULACEÆ. (PRIMWORTS, *Vegetable Kingdom, p.* 644.)

PRIMULA, L.—*Calyx* subcampanulatus vel tubulosus plus minus profunde 5-dentatus vel etiam 5-fidus. *Corolla* hypocraterimorpha vel infundibuliformis, limbo 5-fido, lobis plerumque emarginatis, fauce ad limbum dilatatâ, tubo tereti calycem æquante aut superante. *Stamina* inclusa. *Filam.* brevissima. *Antheræ* sæpe acuminatæ. *Ovarium* globosum aut ovato-globosum. *Ovula* peltatim amphitropa. *Capsula* ovata 5-valvis, valvulis integris aut bifidis apice tantum dehiscentibus, seminibus minimis numerosis.——Herbæ, foliis *plerumque radicalibus*, scapo *simplici*, floribus *umbellatis involucratis rarius verticillatis, sæpissime speciosis.*—DeCand. Prodr. 8. 34.

§ ARMERINA.

Leaflets of the involucre extended downwards into a sheath.

P. *involucrata ;* bulbosa, foliis longè petiolatis ovato-oblongis obtusis subintegris glabris, scapo elatiore 2-5-floro, involucri foliolis ovalibus deorsum in vaginam extensis pedicellorum longitudine, calyce oblongo tereti immaculato tubo corollæ paullo breviore dentibus triangularibus brevibus, corollæ lobis obcordatis imbricatis tubo brevioribus.

P. involucrata, *Wallich Catalogue, no.* 7107. *DeCand. Prodr.* 8. 42.

This is a neat, and very desirable sweet-scented little hardy alpine perennial, which grows freely in a soil composed of sandy loam and leaf-mould. It attains a height of six inches, flowers from March to May, and sometimes a second time during the growing season.

It requires to be planted in rather a shady situation, and to be freely supplied with moisture during the growing season ; but like all other perennials, it must have its season of repose, and should be kept rather dry when dormant, otherwise the large bulb-like crowns become much injured from damp, and frequently perish during the winter.

It is easily increased by the small runners, which are produced freely when the plant is in a growing state, or from seeds.

It was raised in the Garden of the Horticultural Society, from seeds from the North of India, presented by Captain Wm. Munro, in April, 1845. It was said to have been found in company with Cyananthus lobatus, in the neighbourhood of water, at an elevation of 11,500 feet above the sea.

Captain Munro called it *P. spathulata*, but it is exactly the *P. involucrata* of Dr. Wallich's dried plants. The former name is one of Dr. Royle's, and being used by that botanist along with P. involucrata, no doubt indicates some other species, which, however, is not yet published. It is nearly allied to the purple-flowered P. sibirica, and with it forms a well-marked and important section of the Primroses, to which we would apply the name of ARMERINA.

The distinguishing features of the Armerine Primroses is to have the involucral leaves extended downwards into a sheath, as in the genus of Leadworts, called Armeria. This circumstance greatly confirms the affinity of Primworts and Leadworts, and seems to leave no doubt of those two orders both belonging to the same natural alliance. (See *Vegetable Kingdom*, p. 640, &c.)

We gladly avail ourselves of a little space, to bring under the notice of our readers the very interesting account given by Dr. Royle, in his Illustrations of the Botany, &c. of the Himalayas, of the Indian distribution of Primroses, and the associated genera.

"Ornamental as are all the known Primulaceæ, they are no where more so than on the coldest and most exposed of the Himalayan peaks, and at a season when returning warmth has but just begun to displace the scene of wintery desolation. The plants of this family are chiefly diffused through the temperate and cold parts of the northern hemisphere, both in the Old and New World, where they are found in moist, shady, and frequently mountainous situations. But they exist also in the southern hemisphere, as Primula in the Straits of Magalhaens, and I believe also on the mountains of Van Diemen's Land; Lysimachia and Centunculus in New Holland, and Anagallis in Chili and Peru.

"In India, the only plant of this family which is generally diffused through the plains, but this only during the

cold weather, is Anagallis arvensis, found also in the Himalayas, in Europe, and so many other places. Lysimachia obovata was found by Dr. Wallich at the foot of the mountains, in the forests bounding Oude; Androsace rotundifolia and incisa descend to the Deyra Doon. But in the mountains the species of Primulaceæ are about forty-five in number, belonging to the genera Primula, Androsace, Lysimachia, Centunculus, and Samolus, which are all, except Androsace, found also in America. Of these, Lysimachia extends most southerly, as it is found on the Pundua and Neelgherry mountains, as well as on those of Taong Dong, and in Ava, (v. Wall. Cat. N. 1489.) Species are very generally diffused in the Himalayas, and found as high as 7,000 feet at Mussooree, but chiefly during the rainy season; one or two species occur also in Kunawur, with L. thyrsiflora? Linn. Samolus Valerandi, found already so widely diffused in Europe, Asia, and N. America, also in New Holland, and in Central Africa, is likewise found in the Himalayas by the sides of springs and little rivulets, at elevations of 5,000 feet, as near Chinalug, on the Suen range, and also in Kunawur, at Chaogaon. Centunculus indicus, nob. (v. Ic. ined. N. 348.) is also found at moderate elevations. The genera Primula and Androsace have much the same distribution, sending a few species towards the foot of the mountains, and others towards the highest points of vegetation. Thus, as we have seen, Androsace rotundifolia and incisa descend towards the Doon; A. lanuginosa is found in Choor, &c. and other species, as A. reptans and nidulans, nob., in cold and bleak parts of Kunawur; so Primula has one species, P. floribunda, at as low an elevation as 5,000 feet in the neighbourhood of Kuerkoolee; but at higher elevations, as in the ascent to Choor in the earliest springs, and when the snow has just begun to melt from the neighbourhood of stones or trees, or from situations exposed to the full influence of the solar rays, we find, in full and luxuriant flower, P. denticulata and petiolaris; on still loftier situations, as Gossainthan, Kedarkanta, and some of the passes, we find P. Stuartii, with its rich yellow glow, by the side of the equally beautiful P. purpurea; the first also extends to Peer Punjal, where is also found P. elliptica; and in Kunawur, the new species, P. obtusifolia, spathulata, involucrata, and nana, *nob.*

"When we take into consideration the several genera which we have so frequently seen occupying the more elevated belt of the Himalaya, one regrets the poverty of the language at present applied to the geography of plants, as it is impossible to indicate the nature of mountain vegetation by merely using the name of the range; for as we have seen in the case of these mountains, the vegetation varies, and is analogous to that of very different countries, according to the elevation, or as peculiarities of local circumstances cause a variation in climate.

"The inconveniences of this might, it appears, be considerably remedied, if botanical regions on the surface were more circumscribed according to their respective climates, or taking the several zones of latitude, as done by M. Mirbel; or arranging under them the several countries, as done by Mr. Bentham, but commencing with the equatorial, and bringing together the two temperate, as well as the arctic and antarctic zones; or, if necessary, dividing the space between the equator and poles into a greater number of zones, in conformity to Baron Humboldt's Isothermal lines; giving appropriate names to each, and arranging under them, according to their climates the several regions of the globe, &c.; we should have brought together all those which corresponded in meteorological phenomena, in vegetation, and animal life, frequently in agriculture, often in manners and customs, as these so frequently depend upon climate. Mountains might be similarly divided into zones or belts, according as elevation, climate, and vegetation, displayed sufficient differences to warrant the distinction.

"We have frequently seen, that according as we observe the natural phenomena at the base, or towards the apex of these mountains, the correspondence is either with tropical, European, or polar regions; and this might be indicated by a word compounded of that of the mountain range, and of the zone to which the belt corresponded, as Tropico-Himalayan, Arcto-Himalayan, &c. which would sufficiently indicate the nature of the vegetation at different elevations, as well as the geographical situation."

Miss Drake del.

Pub by T. Ridgway 169 Piccadilly June 1 1846

G. Baxter

BOUVARDIA flava.

Yellow Bouvardia.

TETRANDRIA *MONOGYNIA*.

Nat. ord. CINCHONACEÆ. (CINCHONADS, *Vegetable Kingdom, p.* 761.)

BOUVARDIA, Salisb.—Cal. tubus subglobosus, limbus 4-partitus, lobis lineari-subulatis, dentibus interdum interjectis. *Cor.* infundibuliformis tubulosa elongata extus velutino-papillosa, fauce nudâ, limbo 4-partito patente brevi. *Staminum* filamenta tubo inferne adnata a medio circiter libera, antheræ lineares inclusæ. *Stigma* bilamellatum exsertum. *Ovarii* pars superior nuda. *Capsula* membranacea globoso-compressa bilocularis superne loculicido dehiscens, valvis semi-septiferis. *Placentæ* orbiculares. *Semina* in quoque loculo plurima compressa, deorsum (ex icon. Salisb.) seu sursum (ex icon. Cavan) imbricata, alâ membranaceâ cincta.——Frutices *Mexicani*. Folia *opposita aut verticillata*. Stipulæ *angustæ acutæ petiolis utrinque adnatæ*. Pedunculi *terminales triflori aut trichotomi corymbosi.*—Genus Manettiæ affine.—*DeCand. Prodr.* 4. 365.

§ 2. *Leaves opposite. Tube of the corolla beardless.*

B. *flava;* foliis oppositis ovato-lanceolatis acutissimis ciliatis subglabris, stipulis setaceis petiolorum longitudine, racemis terminalibus sessilibus 3-5-floris pedicellis pubescentibus gracilibus, floribus nutantibus, calycis laciniis acuminatis ovario triplo longioribus.

B. flava, "Decaisne in Flora," fide *Horti Vanhoutteani, p.* 17.

The little greenhouse plant now figured was introduced into this country by M. Van Houtte, Nurseryman, Ghent, and is mentioned in his Hortus as having been published by M. Decaisne in the Flora. It appears to be very distinct from all the species previously described, and is, we presume, a native of Mexico. That however is not stated by the anonymous author of the Hortus Van Houtteanus.

In that work the leaves are said to be speckled with purple, a circumstance that has not come under our observation. The flowers, however, are a clear pure yellow, and droop gracefully from their slender purple footstalks.

Our drawing was made in March last, in the Nursery of Mr. Glendinning, of Turnham Green, to whom we are obliged for the following memorandum.

"The increased taste so largely manifested of late years in all the various branches of gardening, is a gratifying and remarkable feature of the age. In no particular part of this delightful pursuit has this increased taste been more conspicuous than in the grouping and effective disposition of the various coloured plants in geometrical Flower Gardens, where it is so desirable to produce judiciously contrasted masses of bloom during the summer and autumn months. Every addition to our Flora calculated for this purpose is eagerly sought after by the possessors of such gardens. Bouvardias are all beautiful, but the present subject, being a novel one, is a new and desirable feature of the genus, rendering it very appropriate for small beds in the Flower Garden. It strikes rapidly by cuttings, and may therefore be increased to any extent; and with me it blooms profusely in the cutting-pot, and grows freely in any good garden soil.

Mr. Van Houtte's directions for its cultivation are these; "If this species is to be grown in all the perfection of which it is susceptible, it should be taken out of the greenhouse early in the spring, and placed in a shady well-aired situation. It would be better still to turn it out into the open ground. Great care must be taken not to force it at that time; for if that is done its flowers become small, and half of them are abortive. In order to make it bloom abundantly, it should be cut back when it is repotted or replanted." He adds, that it will grow three feet high.

Miss. Mouke del.

G. Standley sc.

SAXIFRAGA thysanōdes.

The coarse-fringed Indian Saxifrage.

DECANDRIA *DIGYNIA.*

Nat. ord. SAXIFRAGACEÆ. (SAXIFRAGES, *Vegetable Kingdom, p.* 567.)
SAXIFRAGA.—L.

§. BERGENIA, *Mœnch.*

Calyx basi gamosepalus, ovario non àdhærens, lobis obtusis ascendentibus. Semina angulosa lævia.——Scapus crassus. Truncus basi suffrutescens. Flores subcymosi, purpurei v. albi. Folia coriacea, perennantia, basi in vaginam expansa.—*DC. Prodr.* 4. 37.

S. *thysanodes;* foliis obovatis grossè crenato-serratis utrinque (subtus præsertim) hirsutis fimbriis validis marginatis, scapo glabro ebracteato foliis breviore, racemo parvo congesto subramoso, calyce glaberrimo basi obtuso laciniis obtusissimis petalis subrotundis parùm brevioribus.

The confusion that reigns among the Bergenian Saxifrages of India, has been mentioned at fol. 65 of the volume of this work for 1843. It has no doubt arisen from the inadvertent intermixture of different species under the same name, as is sufficiently shewn by the example before us, which was sent from India as the true S. ciliata. But it cannot be that, because its inflorescence is compact and nearly simple, its leaves hirsute on both sides, and its calyx perfectly smooth. It is in reality a plant of which dried specimens were distributed from the India House, before the return of Dr. Wallich, under the name of S. ligulata. But it differs from S. ligulata in its short petals, more diminutive inflorescence, and hirsute crenated leaves, which are by no means cordate, as those of ligulata always are.

To us it appears to constitute a form of the Bergenian Saxifrages, quite as distinct from all the published species as they are from each other, and we have accordingly named it in allusion to the coarse fringes of its leaves.

It is a pretty robust hardy perennial, growing not more than six or eight inches in height, and flowering in April.

It is increased by dividing the old roots when the plant is at rest, and grows freely in any good garden soil.

Our drawing was made in the garden of the Horticultural Society, where it had been sent from the India House. The roots were transmitted by one of the overland mails of last year, merely packed in dry moss, and were very much dried up; but having been supplied very slowly with moisture at first, they soon recovered.

2

Miss Drake del.

Pub. by J. Sibthorp & Sir C. Smith Jun. 1 1814

ODONTOGLOSSUM membranaceum.

Membrane-sheathed Toothtongue.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. § VANDEÆ—BRASSIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173.)

ODONTOGLOSSUM.—Kunth.

O. *membranaceum;* pseudobulbis foliisque O. Cervantesii, scapo 2-4-floro, bracteis vaginisque membranaceis acutissimis equitantibus, sepalis membranaceis unguiculatis lanceolatis, petalis latioribus oblongis obtusis, labello cordato obtusissimo unguiculato, ungue carnoso cyathiformi pubescente anticè bidentato medio tuberculato, processubus 2 ante cyathum elongatis pubescentibus, columnæ pubescentis auriculis rotundatis.—*Sertum Orchidaceum, sub t.* 25. *Bot. Reg.* 1845. *misc.* 60. 10.

This delicious species—for so it deserves to be called, on account of its agreeable odour and delicate flowers—this delicious species is quite like O. Cervantesii, figured in this work at t. 36 of the volume for last year, in general appearance, and may possibly be a mere variety of it. It differs, however, in the following respects:

Its flowers are whiter and rather larger, and the lip is spotted at the base;

Its petals are much blunter;

Its lip is very deeply heart-shaped, and quite rounded at the point;

The two front teeth of the lip are shorter, and less hairy; and

The concavity at the base of the lip has a much smaller central tubercle.

In other respects the two plants may be regarded as being identical. They are both Mexican, and may be regarded as among the finest species of that country.

The accompanying figure was made in Messrs. Loddiges' nursery, in March 1845. Fig. 1 represents the lip; 2, the column and wings.

Both these stove Orchids, like O. Rossii, may either be tied to a block of wood, with a little sphagnum to retain moisture, or potted in turfy heath mould, in the usual way. In whatever manner they may be treated, an amply supply of water should be given during the summer months, and a damp atmosphere maintained throughout the year. In winter, the soil or moss about their roots should be allowed to become almost dry, especially if grown in a pot. And since such plants are always benefited by being repotted once a year, that operation must be performed while the plant is dry, and in a state of rest.

Pub.d by J. Ridgway 169 Piccadilly July 1 1840

CATTLEYA Lemoniana.

Sir Charles Lemon's Cattleya.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181)

CATTLEYA. Botanical Register, vol. 11. *fol.* 953.

C. *Lemoniana;* pseudobulbis brevibus fusiformibus foliis brevioribus, foliis æquilateris obtusis, spathâ nullâ (?), sepalis angustè lanceolatis acutissimis apice subherbaceis, petalis maximis tenuibus valdè undulatis, labello angusto convoluto pone apicem tantum in limbum convexum parcè undulatum margine erosum reflexum nullo modo crispum expanso.
C. labiata *var.* Lemoniana. *W. B. Booth in litteris.*

To us this appears quite a new and distinct species, remarkable for its short pseudo-bulbs, and long convolute lip, with a convex pallid limb deeply broken up into a few revolute folds at the edge. Mr. Booth, however, regards it as a variety of C. labiata, from which it differs in its short pseudo-bulbs, apparent want of spathe, and contracted lip, wholly destitute of the rich frill of plaits by which that species is so strikingly distinguished.

The accompanying figure has been made by Mr. Booth, to whom we are indebted for the following account of the plant.

"That this is a variety of Cattleya labiata I think there can be no doubt, however different it may appear in the form and colour of its flowers from those of the original species, and of the other varieties of it which have yet been published; but it certainly does not appear to me to possess any peculiarity of sufficient importance to warrant its being kept *specifically* distinct, and I have therefore merely characterized it as a variety, and dedicated it to Sir Charles Lemon, Bart. M.P. already well known for his attachment to this singular tribe of plants, and who has the merit of first introducing it.

"The specimen from which the accompanying figure and description were taken, was imported from the Brazils in 1842, and flowered for the first time, at Carclew, in Septem-

ber, 1845. It requires a warm damp atmosphere, and attaches itself by its long ash-coloured roots, either to a wall, or the branch of an old tree.

"*Pseudo-bulbs*, or stems, one-leaved, erect, cylindrical when young, and almost wholly covered by a large pale brown scale; but channelled and angular when old, and of a deep green. They are generally about four inches high, and three-fourths of an inch in diameter, diminishing to both ends, and slightly compressed at the top. *Leaves* oblong-lanceolate obtuse, thick and rigid, varying from four to six inches in length, and an inch and a half in breadth, of a rich deep green, and having the edges somewhat recurved. *Scape* about two inches long, round, and of a pale green, in our specimen two-flowered. *Pedicells* round, and of the same colour as the scape, thickening outwardly toward the flower, and varying from one and a half to two inches in length, with three small longitudinal grooves, and a minute thin acuminate bract at the base where it joins the scape. *Flowers* when fully expanded upwards of four inches in diameter, of a pale lilac colour, remarkably handsome, and sweet-scented in the day time. *Sepals* spreading oblong lanceolate acute, about two inches long and rather more than half an inch broad, a good deal recurved at the point and along the edges, so that the two almost meet. *Petals* large, ovate-oblong, upwards of two inches in length, and rather less in breadth, delicately marked and undulated at the margin, becoming of a deeper tint in the centre, which is somewhat raised so as to form a kind of midrib a little paler than the rest. *Labellum* three-lobed, and nearly three inches long. The middle lobe is round and spreading, divided in the centre, and very much undulated and recurved at the margin, which is tinted with pale lilac, changing inwardly to a soft yellow colour, and striated with deep red lines along what may be termed the throat of the tube formed by the two lateral lobes, which curve upwards on each side, and embrace one another so as to conceal the column. The outside of this tube is of a deeper lilac than that of the petals, and beautifully veined, becoming compressed when the flower has been open for some time. *Column* scarcely more than a third the length of the labellum, hollowed out below, so as to appear two-edged, and rounded above, with a small round fleshy process projecting over the anther case, of a deep pink colour."

SARCOSTEMMA (Philibertia) campanulatum.

Bell-shaped Sarcostem.

PENTANDRIA *MONOGYNIA.*

Nat. ord. ASCLEPIADACEÆ. (ASCLEPIADS, *Vegetable Kingdom, p.* 623.)

SARCOSTEMMA, R. Br.—*Calyx* 5-partitus. *Corolla* rotata plus minusve alte 5-fida v. urceolato-rotata, sinuato-5-loba, lobis interdum denticulis interjectis. *Corona staminea* duplex monadelpha, exterior cyathiformis v. annularis crenata, gynostegio v. corollæ tubo plus minusve adnata; interior 5-phylla, foliolis carnosis rotundatis acuminatis, exteriorem superans. *Antheræ* membrana terminatæ. *Massæ* pollinis clavato-cylindraceæ, apice affixæ, pendulæ. *Stigma* apiculatum, apiculo obscure emarginato. *Folliculi* graciles læves. *Semina* carnosa.——Suffrutices *erecti v. scandentes aphylli v. foliosi,* foliis *linearibus v. cordatis;* flores *laxe umbellati*, umbellis *lateralibus interpetiolaribus v. terminalibus;* corollæ *albæ, flavæ, variegatæ v. purpureo-guttatæ.*—Genus quamvis habitu, et prima fronte, corollæ forma varia heterogeneum, tamen propter coronæ stamineæ fabricam in speciebus variis unam et eamdem, mea quidem sententia, naturale atque individuum.—*Decaisne in DC. Prodr.* viii. 537.

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§ PHILIBERTIA, *Kunth.* (Leaves cordate. Corolla urceolate-rotate, with 5 sinuous lobes, spotted.

S. *campanulatum;* volubile, pubescens, foliis ovato-oblongis acuminatis altè cordatis basi ferè clausis subtus tomentosis, pedunculis folio brevioribus multifloris, corollis campanulatis glabris extus pubescentibus lobis erectis acuminatis, c. st. ext. fauci adnatâ int. foliolis oblongis obtusis columnam ferè æquantibus, stigmate prominente bilobo.

For this new and very distinct species we are indebted to Messrs. Veitch and Sons, of Exeter, who sent specimens in October last. Our memorandum gives no information of its native country, but we presume it to be Peru.

Its broad cordate leaves, and large yellow campanulate flowers, are strikingly different from those of other previously described Sarcostems, to which M. Decaisne reduces the Philibertias. More especially the base of the leaves being very deeply heart-shaped, with the lobes almost overlapping, is very different from what is found in S. solanoides and grandiflorum.

It is a pretty little shrubby greenhouse climber, well adapted for training over ornamental wirework fastened to the pot, and like most of the plants belonging to Asclepiads, it requires a rich loamy soil and plenty of moisture during the growing season. Afterwards, when done flowering, it should be allowed a time of rest, by gradually withholding moisture until the soil in the pots becomes tolerably dry, when the plant should be placed in the warmest and driest part of the greenhouse until the following spring. At that season the plants should be fresh potted, cut back freely, and placed in a gentle moist heat for a few weeks.

It is easily increased by cuttings, and flowers the greater part of summer and autumn.

AZALEA obtusa.

Blunt-leaved Azalea.

DECANDRIA *MONOGYNIA.*

Nat. ord. ERICACEÆ. (HEATHWORTS, *Vegetable Kingdom, p.* 453.)

AZALEA. L.

A. *obtusa;* foliis pilosis oblongis obtusis cum mucronulo basi angustatis, floribus solitariis pentandris, sepalis patulis triangularibus villosis, corollæ laciniis acutis haud imbricantibus.—*Lindley in Journal of the Horticultural Society, vol.* 1. *part* 2. *p.* 149.

This remarkable species was sent to the Garden of the Horticultural Society by Mr. Fortune, July 26, 1844, as an Azalea, from Shanghae, with fine deep red flowers. Its intelligent and indefatigable discoverer regards it as an acquisition of great importance, and we agree with him in thinking it a most valuable species; for in addition to other merits it has that of being sweet-scented like Sweet Brier.

In the Journal of the Horticultural Society we find the following account of it:—

"This charming shrub may be regarded as the gayest of all the red Chinese Azaleas in cultivation. It is a little bush, with very blunt leaves, both smaller and narrower in proportion than we find upon the species already in our gardens, and also smaller flowers, of the most glowing red. The latter have uniformly 5 stamens only, the characteristic mark of the genus Azalea, and thus seem to show that the additional number hitherto remarked in the Chinese species is a mere result of cultivation. The segments of the corolla are nearly oval and sharp-pointed; the upper one is not much smaller than the others, and is faintly blotched with purple.

"Its high northern latitude would seem to indicate that this plant may be hardy, but it has hitherto been treated as a greenhouse shrub.

"It will doubtless prove to be very useful, in consequence of its being a free flowerer, and of a dwarf habit."

Our drawing was made in the Garden of the Society in March last. The flowers were produced upon young cuttings, and were by no means so brilliant as they will become in the hands of our great Azalea growers.

This species may be said to require exactly the same treatment as A. Danielsiana. The soil should be exclusively rough sandy peat. Although it would appear from the soil about the roots of this plant, when imported, that it naturally grew in loam, yet under pot culture, sandy peat has been found more suitable.

To flower the species well, its wood must be properly matured. An abundance of light is always necessary, and air at all times, when the weather will allow it, especially in autumn, when the young wood begins to harden, for at this time flower-buds are formed. In winter, fire heat should only be applied to keep off frost. It may either be multiplied by grafting, or by cuttings of half ripe wood under ordinary circumstances.

Miss Drake del

EPACRIS dubia.

Doubtful Epacris.

PENTANDRIA *MONOGYNIA.*

Nat. ord. EPACRIDACEÆ. (EPACRIDS, *Vegetable Kingdom, p.* 448.)
EPACRIS. Bot. Reg. vol. 18. *fol.* 1531.

E. *dubia;* **ramulis pubescentibus, foliis subpetiolulatis lineari-lanceolatis acuminatis callo obtuso apiculatis subtus trinerviis margine obsoletè denticulatis, floribus axillaribus subsessilibus in spicam brevem foliosam dispositis, calycibus acutis vix ciliatis corollæ tubo æqualibus, corollæ laciniis acutis, staminibus subinclusis.**

When this plant was first sent us by Mr. Jackson, nurseryman, Kingston, we mistook it for *E. heteronema;* but the leaves are far narrower, are not merely slightly three-ribbed at the base, but plainly so through their whole length, and above all they are terminated by a blunt callus, and not by a slender spine.

Nor is it *E. paludosa*, for its leaves are not acerose, nor are the lobes of the corolla large and rounded.

Nor is it *E. obtusifolia*, for it is not slender enough, nor are the leaves abruptly blunt, nor is the calyx ciliated.

Since, then, it is neither of these three species, and since no others have been described with which it is comparable, we are forced to regard it as new. But is it a wild species? or is it one of those endless garden hybrids, which are becoming now so common as to threaten that garden Botany shall have to be studied upon principles unnecessary and unknown in wild plants? That is a point which we are unable to answer.

In this embarrassment we give it "a local habitation and a name," and nothing more.

Fig. 1. represents the corolla cut open, exposing the stamens and pistil, with the five hypogynous scales.

It requires to be grown in heath mould, mixed with about one-fourth silver-sand. A free drainage is indispensably necessary, for there is perhaps no tribe more easily injured by stagnant water, than the one to which this species belongs. In spring, after the flowering season, all weak twigs should be cut off, and the strong shoots, made the previous year, cut well back; this will secure an abundant supply of young wood, for flowering, the following season. During summer, this plant will be much benefited by being placed out of doors, in some sheltered place, where it may be partially shaded from the mid-day sun. In winter, plenty of air should be given in fine weather, and water always when the soil becomes dry on the surface. It strikes freely from cuttings of half ripe wood, in silver-sand, under a bell glass.

Miss Drake del.

Published by Ackermann, 101 Piccadilly, July 1845

BEGONIA albo-coccinea.

White and Scarlet Begonia.

MONŒCIA *POLYANDRIA*.

Nat. ord. BEGONIACEÆ. (BEGONIADS, *Vegetable Kingdom, p.* 318.)

BEGONIA. Supra, vol. 4. *fol.* 284.

B. *albo-coccinea;* acaulis, foliis obliquè ovatis obtusissimis subreniformibus peltatis coriaceo-carnosis sublobato-sinuatis glaberrimis longitudine petiolorum, petiolis appresso-hirsutis, sepalis 2 exterioribus rotundatis (extus coccineis) reliquis minoribus obovatis (albis), fructu turbinato 3-alato alis latis subæqualibus.—*Hooker in Bot. Mag. t.* 4172. *Donald in the Journal of the Horticultural Society, vol.* 1. *p.* 136. Placentæ simplices.

Whoever shall apply the requisite leisure and skill to an examination and comparison of the numerous species belonging to the order of Begoniads, will be rewarded by a rich harvest of discovery. But he must look to something beyond the stem, the leaves, and the wings of their fruit, if he makes any pretence to a philosophical inquirer. It is in the seeds, placentæ and floral envelopes, that sound characters are to be sought, upon which sections and genera may be founded, instead of the vague characteristics hitherto employed.

This inquiry is attended by no difficulty, for our gardens are full of living species, and the specimens preserved so copiously in modern herbaria are generally examinable enough. It will, however, be unsatisfactory if conducted without reference to the minute anatomy of the genus.

It has already been proposed to separate from Begonia the genus Eupetalum, founded on the B. petalodes, figured at fol. 1757 of this work, and Diploclinium distinguished by its large double placentæ. These are, however, mere indications of structure, and have yet to be applied to the great mass of species belonging to the order. We are ourselves without the leisure to prosecute the inquiry, and therefore we make no attempt on the present occasion to determine whether this may not be a species of Eupetalum; but we republish it under the name already given it by Sir Wm. Hooker.

It was first raised in the Royal Botanic Garden, Kew, from seeds said to have been obtained from the East Indies (India), by a gentleman at Twickenham, and has thence

been extensively distributed. Few, if any, of the order excel it in brilliancy; nor indeed is it easy to point out so lively a contrast of colour as that afforded by the vivid scarlet of the outside of its bivalve calyx, and the snowy interior of that organ and the petals.

Our drawing was made in the Nursery of Mr. Glendinning of Turnham Green.

Those who are desirous of forming a collection of those beautiful plants, will find a useful account of them in the 2nd part of the Journal of the Horticultural Society, where some good directions for their proper management are given by Mr. Donald, from which the following are extracts:—

"In regard to their cultivation I may mention that Begonias are all stove plants, and that they enjoy a humid atmosphere of about 80° in sumner, with a slight shade to break the rays of the mid-day sun. In winter the atmosphere should be kept dry, especially in cloudy weather, and the temperature allowed to fall as low as 58°. Although *B. Evansiana* and others will stand in a greenhouse, still even these species are much benefited by heat and moisture during the early part of the season.

"As Begonias are generally intermix[e]d with other plants, and receive a similar supply of water both in summer and winter, they may well present a sickly appearance. There are few plants that require a more liberal supply during summer than they do; indeed some of the robust growing sorts will flourish with their pots half immersed in water; but, like other plants, they require a season of rest, at which time comparatively little moisture is required. This period is clearly pointed out by nature. In October all the species with which I am acquainted begin to shew that water should then be gradually withheld: if it is continued, some begin to drop their leaves, others to decay at the root or assume a languid appearance; therefore it is obvious that they should be kept dry from the 1st of November to the 1st of February. During that time if water is given once or twice a week it will be sufficient, and the herbaceous sorts may be kept quite dry. Although many species remain green and healthy in winter, the growth they make is but trifling, nor should they be induced to grow, for if they are deprived of the season which nature has provided for their rest, the best of management will not compensate for it in twelve months afterwards."

Miss Drew

*ROYENA lucida.

Shining Royena.

DECANDRIA *MONOGYNIA.*

Nat. ord. EBENACEÆ. (EBENADS, *Vegetable Kingdom, p.* 595.)

ROYENA, L.—Flores subhermaphroditi. *Calyx* plerumque 5-partitus, nunc 5-fidus vel apice 5-lobus, pubescens, plerumque accrescens. *Corolla* 5-fida, campanulata, lobis obtusis, æstivatione sinistrorsum convolutis. *Stamina* 10, basi corollæ adnata, non lobis et sinubus opposita, sed duo ante basim lobi cujusque, in verticillum unicum disposita; filamentis brevibus, simplicibus; *antheris* lineari-lanceolatis, sæpius hispidis, lateraliter dehiscentibus, in floribus femineis vacuis vel interdum abortientibus. *Ovarium* hirsutum, in floribus fem. 4-10-loculare, in masc. pauciloculare, non tamen deficiens. *Stylus* 2-5-lobus, vel potius styli 2-5, simplices vel apice subbilobi, basi coadunati, numero in fl. masc. reducto. *Stigmata* capitellata vel punctiformia. *Glandulæ* 10, circa basin ovarii. *Ovula* in loculis solitaria, pendentia. *Bacca* coriacea, globosa, vel rarius ellipsoidea, in valvas 5 lobis calycinis oppositas non nunquam secedens, loculis (ubi 10) intra valvas geminis. *Semina* ellipsoidea vel oblongo-compressa (in R. villosa), linea longitudinali parva.——Suffrutices *Capenses;* ramulis *pilosis;* foliis *alternis, integris, brevissime petiolatis, sub flore articulatis;* floribus *flavidis, in herbario nigrescentibus, masculinis femineisque magnitudine et forma externa similibus, vix interne distinctis.*—R. ambigua Vent. florem sæpius 6-7-merum præbet, staminaque et styli numero aucta, sed culturæ forsan effectu et enim R. pubescenti et pallenti admodum proxima.—*A. DeCand. Prodr.* viii. 210.

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§ 1. *Calyx apice 5-lobus, accrescens. Styli duo. Ovarium 4-loculare.*

R. *lucida;* ramulis hirsutis, foliis ovatis junioribus sericeis demum superne glabriusculis nitidis subtus præsertim nervo et margine pilosis, pedunculis folio triplo brevioribus hirsutis, calyce campanulato ampliato utrinque hirsuto apice breviter 5-dentato, corolla campanulata calyce duplo longiore profunde 5-fida, lobis obovatis utrinque puberulis.—*A. DC. l. c.*

R. lucida, *Linn. sp. pl.* 588. *Thunb. fl. cap. ed. Sch. p.* 390. *Lam. ill. t.* 370. *f.* 1. *Gærtn. carp.* 2. 80. *t.* 94. *Jacq. fragm. t.* 1. *f.* 6. *Desf. ann. mus.* 6. 446. *t.* 62. *f.* 3.

Staphylodendrum africanum folio singulari lucido, *Herm. parad. t.* 232.

Staphylodendron africanum foliis splendentibus, *Commelyn hort. amstelod.* 1. *p.* 187. *t.* 96.

It is not a little remarkable that this fine old greenhouse shrub should not have found a place in any English collection

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* "Linnæus named the genus after Adrian van Royen, professor of Botany in the University of Leyden, who died in 1779, aged 74, and was succeeded by his nephew David, who died in 1799."—*Smith.*

of coloured plates; yet it is said to have been introduced in 1690, and has probably never been lost to cultivation up to the present day.

It is a native of the Cape of Good Hope, whence it was imported by the Dutch, among the earliest productions of their South African colony. The Berry is said to be red, and fleshy like an Apple, and about as large as a Damson. For this reason the species has had the reputation of being a fruit tree, to which it has no better title than our own Hawthorn. It, however, represents a natural order, in which the seed-vessel of a few species becomes eatable when bletted, as occurs in the Chinese "Fig," or Diospyros Kaki, and the Lote trees of Europe and North America.

Our drawing was made in the garden of the Horticultural Society, where it had been received from Sir Philip Egerton, Bart.

It cannot dispense with the protection of a greenhouse. The soil best adapted for it is sandy loam and peat in equal proportions. Like many other plants, this has a tendency, when young, to run up with a single stem; but this may be prevented by pinching off the terminal buds once or twice in the course of the year, when the plant will assume as bushy a form as any other. It is a species of free growth, and requires nothing different in its treatment from what is usually bestowed on greenhouse plants.

Fig. 1. represents a stamen; 2. a perpendicular section of the pistil magnified.

1

ANGULOA Ruckeri.

Mr. Rucker's Anguloa.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. § VANDEÆ. ‖ MAXILLARIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181.)

ANGULOA, Fl. Peruv. prodr. 118. *t.* 26. *Flores* subglobosi, nunquam patentes. *Sepala* lateralia invicem imbricantia, basi valde convexa, nec in cornu producta; alterum nunc anticum nunc posticum, conforme, basi planum. *Petala* sepalo dorsali æqualia, et similia. *Labellum* coriaceum, unguiculatum, subconvolutum, trilobum, laminâ carnosâ latâ planâ supra medium auctum, hinc quasi bilabiatum. *Columna* teres, clavata, libera; *clinandrio* nunc mutico, nunc laciniâ acutâ porrectâ utrinque aucto. *Anthera* galeata, valvis membranaceis nunc in lacinulas acutas productis. *Pollinia* 4, plana, inæqualia, *caudiculâ* longâ lineari, et *glandulâ* acutâ.——Herbæ *epiphytæ Granatenses & Peruvianæ*, Lycastes *facie*.—Bot. Reg. 1846. t. 60.

A. *Ruckeri*. (Vide infra).

This charming plant makes the third species now in our gardens, of a genus, which, in the spring of 1844, was a botanical puzzle. Such is the progress of scientific discovery when promoted by horticultural enterprise.

All the species have been found by the fortunate exertions of Mr. Linden. One of them (*A. Clowesii*) was met with in low bottoms, in the midst of forests, in Venezuela, growing in the ground. The history of the two others is unknown. One of them (*A. uniflora*) exists in Mr. Linden's herbarium, but by some mistake in the ticketing it is marked there as a Cuba plant; the other was sent to Mr. Rucker, whose specimen is now represented, and its locality is unknown.

A. *Ruckeri* is immediately recognized by its flowers having deep crimson spots on a yellow ground, and a deep crimson lip. The form of the latter again approaches that of A. Clowesii, but it is less hairy, and the lateral lobes are blunt, as well as shorter. Moreover, the flower is not resupinate, in the common acceptation of the term. The species was among the most striking of all the Orchids

exhibited in the Garden of the Horticultural Society in May last, at which time the accompanying drawing was made. Fig. 1 shews the form of the lip when spread open.

The following is a list of the species of Anguloa hitherto discovered :—

1. A. *uniflora* (Fl. Peruv. syst. p. 228. Lindl. gen. & sp. Orch. p. 160. Bot. Reg. 1844. t. 60) ; pedunculo unifloro radicali squamis 2 inflatis imbricatis vaginato, flore bracteâ spathaceâ herbaceâ parum longiore, sepalis lateralibus anticis petalisque acuminatis, labelli glabri lobo medio angustissimo reflexo lateralibus rotundatis, laminâ appendiculari retusâ duplò latiore, clinandrio lacinulis 2 acutis aucto.——*Colombia.*——Flowers white, with a slight tinge of yellow, sweet-scented.

2. A. *Clowesii* (Lindl. in Bot. Reg. 1844. misc. 29, t. 63) ; pedunculo unifloro radicali laxè squamato, flore carnoso resupinato, sepalis petalisque ovatis convexis conniventibus, labelli trilobi lobo medio piloso infundibulari bilabiato : labio altero emarginato altero tridentato, columnâ integrâ.——*Colombia.*——Flowers straw coloured. Lip white.

3. A. *Ruckeri* (Lindl. in Bot. Reg. 1846. t. 41) ; pedunculo unifloro radicali squamis inflatis imbricatis vaginato, sepalis subrotundis apiculatis petalisque obtusis in globum conniventibus, labelli trilobi antici lobis lateralibus obtusis æqualibus medio piloso infundibulari bilabiato : labio altero emarginato altero tridentato, columnâ integrâ.——*Colombia.*——Flowers yellow, spotted inside with crimson, and having a lip of the latter colour.

4 ? ? A. *squalida* (Pöppig n. g. & sp. pl. I. p. 43, t. 74) ; "scapo spicato multifloro ; floribus secundis ; sepalis reflexo patulis ; foliis sex ad octonerviis."——*Peru.*——Flowers "the size of a walnut, dirty flesh colour, scentless."

Miss Drake del.

CALYSTEGIA pubescens.

Downy Bindweed.

PENTANDRIA *MONOGYNIA*.

Nat. ord. CONVOLVULACEÆ. (BINDWEEDS, *Vegetable Kingdom, p.* 630.)

CALYSTEGIA, R. Br.—*Bracteæ* duæ oppositæ florem involventes. *Sepala* 5 æqualia. *Corolla* campanulata. *Stylus* 1. *Stigma* bilobum, lobis lineari aut oblongo-cylindricis etiam complanatis. *Ovarium* biloculare, apice ob dissepimentum abbreviatum 1-loculare.——Herbæ *volubiles, aut repentes*; genus *facilè noscendum, at non charactere strenuo insignitum.*—DC. Prodr. ix. 433.

*C. *pubescens*; caule volubili pubescente, foliis oblongis acutis hastatis pubescentibus lobis baseos angulatis, pedunculis angulosis unifloris, bracteis ovatis ciliatis margine reflexis.—*Lindley in Journal of Hort. Soc.* 1. 70.

We are able to add nothing to the account of this plant given in the Journal of the Horticultural Society.

We are there informed that it was "raised from a small portion of the root found in a dead Pæony root, in box No. 22, from Mr. Fortune's mission in China. The box was sent from Shanghai, and stated to contain a plant of the double Convolvulus, which was supposed to be dead when received at the garden in June, 1844."

This curious plant approaches very nearly to the C. sepium, or larger bindweed of our English hedges, from which it differs in having firmer and smaller leaves, much narrower bracts, and a fine pubescence spread over every part. It is the first plant of its order that has been mentioned as producing double flowers. They are about as large as those of a double Anemone, but the petals are arranged with the irregularity of the Rose; they are of a pale very delicate pink, and remain expanded for some days. The calyx is quite unchanged. The exterior petals are very much lacerated and irregular in form; those next the centre are narrow, drawn together into a kind of cone; the next central are completely concealed by those without them, and diminish till

they are mere scales, analogous to those which may be found in the first buds which burst in the spring. Not a trace can be found of stamens or pistil.

It is probably quite hardy if planted in a dry situation. It requires a rich loamy soil, and is easily increased by the roots. The roots very much resemble those of the common bindweed (Calystegia sepium). It flowers freely in July and August. It is a very handsome climbing plant, with large double flowers, which are produced freely.

Miss Drake del. Pub. by J. Ridgway 169 Piccadilly, Mar. 1 1846 Lovell

GARDENIA florida; *var.* Fortuniana.

Mr. Fortune's Gardenia.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CINCHONACEÆ. (CINCHONADS, *Vegetable Kingdom, p.* 761.)

GARDENIA. L.

G. florida, *Linn. sp. pl.* 305. *Bot. Reg. t.* 449. (the single state).
G. radicans, "*Thunb. diss. no.* 1. *t.* 1. *f.* 1." *Bot. Rep. t.* 491. *Bot. Reg.* 4. 73. (the double state).

We entirely agree with Dr. Wallich in regarding the two supposed species above quoted as mere varieties of each other. There is nothing tangible in the pretended distinctions by which it is said that they may be recognized.

The magnificent variety now figured from the garden of the Horticultural Society, was sent from the north of China, by Mr. Fortune. In the Journal of the Society is the following account of it:

"The common single and double varieties of this plant are known to every one. That which is now noticed differs merely in the extraordinary size of the flowers, which are nearly four inches in diameter, and in having fine broad leaves sometimes as much as six inches long. The flowers are pure white, changing to light buff as they go off, and not unlike a very large double Camellia. Their calyx has the long broad lobes of the original species, instead of the narrow lobes, at least twice as short as the tube of the corolla, of G. radicans, by which that species is technically known.

"It is one of the very finest shrubs in cultivation, and ranks on a level with the double white Camellia, which it equals in the beauty of the flowers and leaves, and infinitely excels in its delicious odour."

CLEMATIS hexasepala.

Six-petaled Virgin's bower.

POLYANDRIA *POLYGYNIA*.

Nat. ord. RANUNCULACEÆ—CLEMATEÆ. (CROWFOOTS, *Vegetable Kingdom, p.* 427.)

CLEMATIS. L.

Sect. ? TRIQUADRIA; sepalis petalisque 3, staminibus 6 !

C. hexasepala, *DeCandolle's Prodromus, vol.* 1. *p.* 5. *A. Cunningham in Annals of Natural History, vol.* 4. *p.* 260. *Journal of the Horticultural Society, vol.* 1. *p.* 239.

C. hexapetala, *Forst. Prodr. n.* 230.

Although, in conformity with the authors who have gone before us, we leave this plant in Clematis, yet we do so with a protest against its being so regarded by systematists: for how can a plant with a ternary structure and definite stamens be associated with those which have a quaternary structure and indefinite stamens? For the present the name TRIQUADRIA, expressive of this remarkable peculiarity, may stand as the name of a section; but it will surely be taken hereafter as that of a genus.

It is a New Zealand plant, seeds of which were presented by J. R. Gowen, Esq., in 1844, to the Horticultural Society, in whose Journal the following account is given of it:

"This is a little twining plant, with shining nearly smooth ternate or biternate leaves, whose petioles twine round any small body with which they may come in contact. The leaflets are cordate-ovate, coarsely serrated, and often three-lobed. The flowers are small, pale green, very sweet-scented, and appear in threes or fours from the axils of the leaves. Their stalks are long and hairy, and each has a pair of small bracts below the middle. The sepals are very uniformly six in number, of a narrowly oblong form, and spreading so as to form a small green star. Contrary to the usual structure of

the genus, the stamens are constantly six only in number, and about half as long as the sepals.

"The late Mr. Allan Cunningham gathered it in the northern island of New Zealand, but it was first found by Sir Joseph Banks in 1769, and a drawing of it is said to be preserved in the Banksian Library.

"It is a hardy greenhouse plant, requiring a light loamy soil to grow in, and is easily increased by cuttings of the half ripened wood. It only requires the protection of a cold pit or frame during winter, and flowers abundantly in April.

"Although its blossoms are green and inconspicuous, it is far from an unimportant species, on account of its blooming freely, and being very sweet-scented."

RUELLIA lilacína.

Lilac-flowered Ruellia.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. ACANTHACEÆ. (ACANTHADS, *Vegetable Kingdom, p.* 678.)

RUELLIA, L.—Calyx ad basim quinquepartitus, laciniis subæqualibus linearibus apice subdilatatis herbaceis, vel æqualibus acuminatis. *Corolla* infundibuliformis, tubo in limbum anguste campanulatum quinquefidum continue transeunte, laciniis æqualibus obtusis. *Stamina* quatuor, didynama, basi faucium inserta. *Antheræ* oblongæ, bilocellatæ, locellis parallelis contiguis æqualibus muticis vel basi mucronulatis. *Stigma* subulatum, spirale, dorso spongiolosum, canaliculatum, basi denticulo auctum. *Capsula* angusta, quadrangularis, ad basim usque bilocularis, a basi ultra medium sex-octosperma. Dissepimentum completum, adnatum. *Semina* retinaculis mediocribus suffulta.—Inflorescentia :—*spicæ, plerumque in capitulorum formam contractæ, foliaceo-bracteatæ ideoque rudes et parum conspicuæ.* Bracteolæ *nullæ vel angustæ.* Flores *mediocres.* Pleræque herbaceæ sunt et hirsutæ. *Nees v. Esenbeck in Wallich's Plantæ Asiaticæ rariores,* 3. 82.

R. *lilacina ;* fruticosa, glabra ; caule tetragono, foliis brevè petiolatis lucidis ovato-lanceolatis acuminatis subundulatis, floribus solitariis axillaribus, bracteis cuique 2 maximis ovato-subrotundis obtusis, calyce 5-partito glabro laciniis lineari-lanceolatis inæqualibus, sepalis linearibus, corollæ tubo curvo in limbum subcampanulatum bilabiatum æqualiter 5-partitum laciniis emarginatis expanso, capsulæ loculis 8-9-spermis, seminibus compressis margine tomentosis.

R. lilacina, *Hooker in Bot. Mag. t.* 4147.

We have to correct a great error into which we fell, when, in an early number of the present volume, we referred this plant, Sir Wm. Hooker's *Ruellia lilacina,* to the so-called *R. longiflora* of the Gardens. It now turns out that we had not seen this, the real *R. lilacina,* at the time when we fell into the mistake, and we allowed ourselves to be misled by a certain similarity of appearance in the drawings of the two plants, a great resemblance in their leaves, and by their having been both obtained from Mr. Glendinning's Nursery.

We now, however, find, that in truth the two plants are wholly different ; and that, while the species formerly figured has large panicles of flowers, the present, in all respects

inferior in beauty, has as invariably solitary axillary flowers; they are, moreover, distinctly two lipped, and have a curved clubshaped tube, instead of the equal limb and slender tube of what may as well retain for the present its former name of *R. longiflora*. In addition to which, each flower is concealed, before expansion, between two large flat valve-like bracts, which are applied to each other by their faces.

It is apparently a different genus from R. longiflora; but we dare not venture even to guess at its station in the midst of the present extreme confusion among Acanthads.

For its cultivation, see fol. 13 of the present volume.

C. Wanscewiczii, Hort Kew. Orch. Rev. iii. 263

CYCNOCHES Egertonianum; *var.* viride.

Green Egertonian Swan-neck.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. § VANDEÆ—CATASETIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181.)

CYCNOCHES. Supra, t. 1742.

C. *Egertonianum*; racemo longissimo pendulo, sepalis petalisque membranaceis recurvis, labelli disco rotundato in processubus clavatis acutisque æquilongis soluto, columnâ tenui longissimâ.

α. Floribus atropurpureis.

C. Egertonianum, *Bateman Orchid. Mexic. & Guatemala, t.* 40.

β. Floribus pallidè virentibus.

C. stelliferum, *Loddiges' Cat. no.* 1017.

This plant was imported from Oaxaca by Messrs. Loddiges, and flowered with them in August 1843, when the accompanying figure was made. It is evidently a variety of the C. Egertonianum, distinguished by its flowers being of a pale watery green, and not deep purple.

But what is *C. Egertonianum* itself? In our volume for 1843, at p. 77 of the miscellaneous matter, we have extracted from Mr. Bateman's magnificent work his account of how the long-spiked small-purple-flowered *C. Egertonianum* is only the short-spiked large-green-flowered *C. ventricosum*; how the same plant at one time bears one sort of flowers, and at another time another sort; and we have shewn how the same plant, nay the same spike, is sometimes both the one, the other, and neither. *C. Egertonianum* is then a "sport," as gardeners say, of *C. ventricosum*.

But what again is *C. ventricosum*? Who knows that it is not another "sport" of *C. Loddigesii*, which has indeed been caught in the very act of shewing a false face, something wonderfully suspicious, all things considered, and justifying the idea that it is itself a mere Janus, whose face is green and short on one side, and spotted and long on the other.

Then, if such apparently honest species as *C. Egertonianum*, *ventricosum*, and *Loddigesii* are but counterfeits, what warrant have we for regarding the other so-called species as

not being further examples of plants masquerading with false faces? For ourselves we cannot answer the question; nor should we be astonished at finding some day a Cycnoches no longer a Cycnoches, but something else; perhaps a Catasetum. If one could accept the doctrine of the author of the "Vestiges," it might be said that in this place we have found plants actually undergoing the changes which he assumes to be in progress throughout nature, and that they are thus subject to the most startling conditions only because their new forms *have not yet acquired stability*.

Be that as it may, it will be as well to state in this place what the so-called species are of this extraordinary genus, and what the changes are which they have been seen to undergo.

So-called species of CYCNOCHES.

1. C. *Loddigesii* (Lindl. Gen. & Sp. Orch. p. 154. Bot. Cab. t. 2000. Bot. Reg. t. 1742.)——*Surinam.*——Flowers very large, fragrant, green and purple, with a white spotted lip. *Sports by producing smaller broad-lipped flowers without scent, and with a very short club-shaped column.*
2. C. *ventricosum* (Bateman Orch. Mex. & Guatemala, t. 5.)——*Guatemala.*——Flowers large, green, with a white lip. *Sports to Egertonianum.*
3. C. *chlorochilon* (Klotzsch. Sertum Orchidaceum, t. 16.)——*Maracaybo.*——Flowers very large, green, whole-coloured. *Has not been observed to sport:* but is probably a mere variety of C. ventricosum.
4. C. *pentadactylon* (Lindl. in Bot. Reg. 1843. misc. 26. t. 22.)——*Brazil.*——Flowers large, yellowish green, banded with brown. *Has not been observed to sport.*
5. C. *maculatum* (Lindl. in Bot. Reg. 1840. misc. 8. Sertum Orchidaceum, t. 33.)—— *Mexico? La Guayra.*—— Flowers small, yellow, spotted with brown. *Has not been observed to sport.*
6. C. *Egertonianum* (Bateman Orch. Mex. & Guatemala, t. 40. Bot. Reg. 1846. t. 46.)——*Guatemala and Mexico.*——Flowers small, purple or greenish, unspotted. *Sports to ventricosum.*

ACANTHOPHIPPIUM javánicum.

Javanese Acanthophippium.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ. (ORCHIDS, *Vegetable Kingdom, p.* 180.)

ACANTHOPHIPPIUM, Blume.—Supra, t. 1730.

A. *javanicum ;* petalis triangularibus, labelli trilobi lobis lateralibus truncatis intermedio medio constricto apice ovato tuberculato basi utrinque carnoso dentibus truncatis emarginatis inflexis.

A. javanicum, *Blume Bijdr.* 353. *tabellen* 47. *Lindl. Orch. no.* 1.

This plant, the original species of Blume's genus Acanthophippium, was found by its discoverer in the woods of the higher parts of Mount Salak in Java, where it flowers from February to April. Our drawing was made from a specimen communicated in September 1844, by Messrs. Loddiges.

It is a very pretty thing, because of the clear pale purple stripes drawn down the outside of the flowers, and the delicate lilac of the orifice. As a species it is readily known by its three-lobed lip having the centre division contracted in the middle, uneven and ovate at the point, and fleshy at the base, with thick fleshy irregularly-toothed sides. Fig. 1. represents it.

It requires the same kind of treatment as the well known Acanthophippium bicolor. It should be potted in turfy peat, in well drained pots, and liberally supplied with water during the season of growth. Water should be more sparingly supplied when the plant is in a state of rest, or in very dull, damp weather. A temperature of about 65° in winter, and from 70° to 80° in summer, with fire heat, is quite sufficient for its growth. The stove, or Orchidaceous house should be well shaded during bright sunshine.

It may be easily propagated by taking the plants to pieces, but this should always be done when it is resting, and just before the season of growth recommences.

September, 1846.

The following are the species of this genus at present known—

1. A. *javanicum*; now figured.

2. A. *striatum* (Lindl. in Bot. Reg. 1838. misc. 68); labelli lobis lateralibus rotundatis intermedio minimo acuto carnoso utrinque plicato, disci callo solitario elevato longitudinali.——*Nepal.*——Flowers French white, with dull stripes, smaller than in A. bicolor.

3. A. *Sylhetense* (Lindl. gen. and sp. orch. no. 2); labelli lobis lateralibus acutis: lamellis 3 carnosis denticulatis. ——*Sylhet.*——Flowers white, scentless, obovate.

4. A. *bicolor* (Lindl. in Bot. Reg. t. 1730); labelli lobis lateralibus rotundato-cuneatis intermedio ovato scabrido lamellis basi 2 concavis.——*Ceylon.*——Flowers yellow, ovate, with crimson and purple tips.

JASMÍNUM nudiflorum.

Naked-flowered Jasmine.

DIANDRIA *MONOGYNIA*.

Nat. ord. JASMINACEÆ. (JASMINWORTS, *Vegetable Kingdom, p.* 650.)

JASMINUM. L.

J. *nudiflorum ;* ramis angulatis vimineis, foliis hysteranthiis trifoliolatis glabris, foliolis ovatis acutis, floribus (luteis) solitariis basi squamatis, calycis laciniis linearibus herbaceis, corollæ limbo 6-lobo obtusissimo.—*Lindl. in Journ. of Hort. Soc. I. p.* 153.

Here we have another of the interesting plants introduced from China by Mr. Fortune. "It is a shrub with angular deep-green trailing branches, which have little disposition to branch in the first year of their growth. The leaves are shining, deep green, and each consists of three sessile leaflets of an ovate form. They fall off early in the autumn, soon after which they are succeeded by large yellow scentless flowers, which grow singly from the buds formed in the axils of the leaves that have previously dropped. The limb of their corolla is about an inch in diameter, and divided into six broad, oblong, blunt, flat segments.

"The species, although new to gardeners, is not entirely unknown, for it has been distributed in a dried state from the Imperial Russian-Chinese Herbarium, under the erroneous name of J. *angulare.*

"It appears to be a greenhouse plant, and grows freely in almost any sort of soil, especially rough sandy peat. During summer an ample supply of water should be given to its roots, and it must be syringed over head once or twice a day. In consequence of its slender habit it is necessary either to train it on a trellis or to induce it to form an upright stem three or four feet high, so that the young twigs may hang down as they may be naturally inclined.

"Being a free winter bloomer, and continuing in flower for a length of time, it will doubtless prove a good addition to our greenhouse plants."

To this account, extracted from the Journal of the Horticultural Society, we can now add that the species seems likely to prove hardy. Mr. Fortune has furnished us with the following memorandum about it.

"This species was first discovered in gardens and nurseries in the north of China, particularly about Shanghae, Soochow, and Nanking. It is a very ornamental dwarf shrub, and I have no doubt of its being perfectly hardy in this country. It is deciduous; the leaves falling off in its native country early in autumn, and leaving a number of large prominent flower-buds, which expand in early spring,—often when the snow is on the ground—and look like little primroses.

"It is easily multiplied by cuttings or layers, as it has a tendency to throw out roots at the joints on the stem. The Chinese often graft it on the more common kinds, about a foot from the ground, which improves its appearance. Any common soil will suit it, and it will answer well for a rockwork, or small garden where neat flowering shrubs are desirable."

HOLBÖLLIA latifolia.

Broad-leaved Holböllia.

MONŒCIA *HEXANDRIA.*

Nat. ord. LARDIZABALACEÆ. (LARDIZABALADS, *Vegetable Kingdom, p.* 303.)

HOLBÖLLIA, Wall.—Masc. *Calyx* 6-phyllus, foliolis crassiusculis exterioribus ovatis in æstivatione valvatis, interioribus angustioribus, oblongo-lanceolatis concavis acuminatis, tenuiter nervatis. *Petala* 6 biseriata parvula acutiformia, carnosa vel lanceolata membranacea. *Stamina* 6 libera, filamentis linearibus, crassiusculis, in tubum approximatis, *antheris* apiculatis. *Ovariorum* rudimenta 3, subulata v. conoidea carnosa.—Fem. *Calyx* fol. ut in masc. *Stamina* 6 parvula, *antheris* abortivis, subclavata. *Ovaria* 5 distincta, conoidea v. oblonga, stigmate sessili, conico, subobliquo terminata, ovulis numerosis parieti filiformi seriatim immersis. *Baccæ* polyspermæ, stigmate persistente apiculatæ. *Semina* subperitropa v. anatropa testa papyracea fusca, hili cicatricula basi et lateraliter notata; perispermum magnum, carnoso-corneum, albidum; embryo parvulus radicula cotyledonibus subæquali.——Frutices *Indici scandentes, magni, gemmiferi*, foliis *peltatim digitatis*. Racemi *axillares, pauciflori*, floribus *albis extrorsum purpureo-tinctis, fragrantibus*. Baccæ *purpureæ esculentæ*.—Decaisne Mémoire sur les Lardizabalées, p. 193.

H. latifolia, *Wallich Tentamen Floræ nepalensis, p.* 24. *t.* 16. *Decaisne Mém. Lardizab. p.* 194.
Stauntonia latifolia, *Wallich Cat. no.* 4950.

For the opportunity of figuring this rare plant we are indebted to L. W. Dillwyn, Esq. of Sketty Hall, near Swansea, with whom it flowered, perhaps for the first time in Europe, on a south wall, without protection, in the beginning of last March. Other plants, in the stove and conservatory, have shewn no disposition to blossom.

If only as a new hardy or half hardy climber, it is a plant of interest, notwithstanding the greenness of its flowers. But it is sweet-scented. Mr. Dillwyn informs us that the female blossoms have a faint sweet smell, such as is common in flowers of the same colour, but this smell is infinitely more powerful in the males, which towards sunset fill the air, in favourable weather, for several yards around, with a delicious perfume.

The latter appear later than the females: there was full ten days between the first opening of the two sexes.

This genus was named by Dr. Wallich after Mr. Frederick Louis Holbœll, Superintendent of the Royal Botanic Garden at Copenhagen, "an experienced botanist, and a contributor to Hornemann's *Flora Daniæ œconomica*." Dr. Wallich also calls him "amicus et præceptor carissimus." It belongs to the small order of Lardizabalads, and is the only hardy representative of that group.

Fig. 1. represents a section of one of the male flowers.

Dr. Wallich gives the following account of the two species known to him, viz. *H. latifolia* and *angustifolia*.

"These two shrubs are easily distinguished from each other. The first species is by far the strongest, growing sometimes to a gigantic size. I brought specimens down with me, for the Honourable East India Company's museum, of a trunk, as thick as a good sized arm. Its leaves are broad, ovate, either ternate or quinate, about as long as the common petiole; the flowers quite white, collected in clusters; the berries large and ovate, the seeds oblong. The second species has long petioled leaves; the leaflets from seven to nine, narrow, or linear-lanceolate, scarcely two-thirds of an inch broad; the peduncles few-flowered, and the flowers attaining, soon after expansion, a purplish colour; the berries are not so thick, and of an oblong shape; the seeds reniform. The natives of Nipal eat the fruit of both plants, the pulp of which has a sweetish, but otherwise insipid taste."

LILIUM sanguineum.

Blood-red Lily.

HEXANDRIA *MONOGYNIA*.

Nat. ord. Liliaceæ. (Lilyworts, *Lindley's Vegetable Kingdom, p.* 200.)

LILIUM. L.

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§ Eulirion. *Sepala unguiculata, campanulato-conniventia, sulco nectarifero distincto.*—Kunth.

L. *sanguineum ;* nanum, glaberrimum, foliis densis subverticillatis ovato-lanceolatis acutis, flore erecto solitario, sepalis petalisque unguiculatis staminibus æqualibus, sulco nectarifero tomentoso.
L. sanguineum, *Hort.*

This is said to be a plant of Japanese origin, and if so it is no doubt one of the discoveries of Siebold ; but we find no record of it in books.

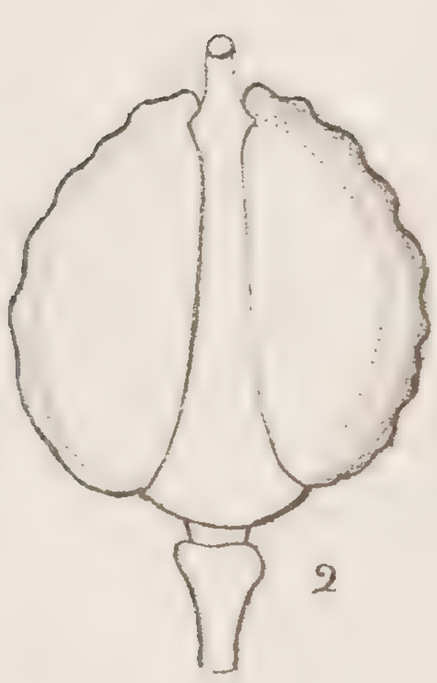
It is remarkable for its dwarfness, not growing more than twelve or eighteen inches high, and for the vivid colour of its large solitary orange-red flower. It might be supposed to be a variety of L. Thunbergianum, but that plant has a tall hairy stem bearing several flowers of a larger size, with much shorter stamens, and a less brilliant colour. The divisions of the flower are, moreover, very distinctly stalked, which brings the species nearer to L. philadelphicum, from which it is clearly distinguished by its upper leaves not being distinctly verticillate, and by its great woolly honey-furrow.

Our drawing was made in the garden of the Horticultural Society, where it proves to be a half hardy bulb, growing freely in a light loamy or peaty soil, to which has been added a small portion of well decomposed cow dung or leaf mould. The bulbs, like those of the other kinds of Lily, always suffer when disturbed, and should therefore only be entirely removed from the soil when an increase is wanted.

It is easily increased, either by parting the old bulbs or by

the scales, each scale forming a plant, but then they require two or three years before they bloom.

It flowers in May or June, and was presented to the Society by Mr. Groom.



2

3

4

1

IONOPSIDIUM acaule.

Stemless Violet-Cress.

TETRADYNAMIA *SILICULOSA*.

Nat. ord. BRASSICACEÆ. (CRUCIFERS, *Vegetable Kingdom, p.* 351.)

IONOPSIDIUM, Rchb.—Genus propter radiculam *dorsalem* a Pleurorhizeis ritè separatum, certe Lepidineis adsociandum et forsan cum Capsella conjungendum, a qua vix satis distinctum videtur.—*Meisn. Tabulæ, p.* 13.

Ionopsidium acaule, *Rchb. iconographia,* vii. 26. *t.* 649.
Cochlearia acaulis, *Desfontaines, Flora Atlantica, vol.* ii. *p.* 69. *DeCand. Syst.* ii. 371. *Journal of Hort. Soc. vol.* i. *p.* 146.
Cochlearia pusilla, *Brotero, Phytographia Lusitanica, p.* 100. *no.* 45. *t.* 21. *figs.* 2 & 3.

This charming little annual was received by the Horticultural Society from the garden of the Duc de Palmella, near Lisbon, in March, 1845. The following account of it has been published in the Journal of the Horticultural Society.

"It is found wild, according to Brotero, on the basaltic hills near Lisbon, and occasionally on the limestone formation of Estremadura. Desfontaines also met with it in Barbary.

"A beautiful rock plant for shady situations; its flowers are of a clear lilac, and the foliage is of a delicate green colour. It propagates itself by seeds, and by runners which throw out roots abundantly into the damp soil.

"It is a hardy little annual, growing in any rich garden soil, and blooming from April to October. It requires rather a moist (shady) situation. Its small flowers (they come out white and turn to a pale lilac) appear in profusion from April to October." It makes a neat edging to borders in shaded places, and is a capital rockwork plant.

DeCandolle considered it a kind of Scurvy-grass, and referred it to the genus Cochlearia; but Reichenbach, perceiving that its radicle lies against the back of the cotyledons

and not the edge, converted DeCandolle's sectional name of Ionopsis into that of Ionopsidium.

It is certainly no Cochlearia ; nevertheless, it may as well continue to bear in gardens its old name of Cochlearia acaulis, unless our English one is preferred.

Fig. 1. shews the ovary and stamens ; 2. the silicle ; 3. a seed, covered with small blisters ; 4. a section of it, shewing the position of the radicle.

1

OPHRYS cornuta.

Horned Ophrys.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. § OPHREÆ — SERAPIADÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173.)

OPHRYS. L.

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§ 2. CORNUTÆ. *Labello basi utrinque cornuto.*—Lindl. Orch. p. 374.

O. *cornuta;* perigonii segmentis interioribus convolutis villosis columna rostrata duplo brevioribus, labelli segmento medio obovato subretuso breviter appendiculato convexo fusco-nigricante velutino, corniculis lateralibus in appendicem subulatam hamato-adscendentem elongatam productis.—*Grisebach, Fl. Rumel.* ii. *p.* 367.

O. cornuta, *Stev. mem. mosq.* 2. 174. *t.* 10. *Rchb. ic. Europ. t.* 1870. *Lindl. Orch. p.* 375.

O. bicornis, *Sadler in Linnæa*, 205. *litt.*

"O. œstrifera, *Expédition à la Morée, t.* 31. *f.* 1. *& t.* 32. *f.* 8." fide *Griseb.*

"O. œstrifera, *Wahlenb.*" Griseb.

This curious little plant has long been known as an inhabitant of the Crimea; and it had been recently discovered in Dalmatia by Baron Welden, in Hungary by Nentwich, and in Macedonia by Frivaldsky. But it remained for the Dean of Manchester to give it a more southern locality, by detecting in Corfu the specimens now figured.

The markings of the lip are very singular, but variable, as will be seen from the two sorts in our plate; and it would seem that this variation goes further, for Grisebach describes the Roumelian form with a greenish calyx, yellow spots in the middle of the lip, and blue horns.

The specimens represented in the accompanying plate flowered in Dr. Herbert's drawing-room in London.

Miss L. Tuke del.

Pall Mall East, Publish'd by Longman, Hurst, Rees, Orme & Brown, Paternoster Row, & Piccadilly, Oct.r 1 1814.

BRASAVOLA Digbyana.

Mr. Digby's Brasavola.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. § EPIDENDREÆ—LÆLIADÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181.)

BRASAVOLA. Botanical Register, fol. 1465.

Br. *Digbyana;* foliis ovalibus planis carnosis glaucis, labello sessili cucullato cordato subtrilobo margine in crinis longis soluto in disco callo maximo aucto, dente postico subulato incumbente.

This very singular plant was introduced from Honduras by Mrs. McDonald, and by that lady given to Edward St. Vincent Digby, Esq. with whom it flowered last July, at Minterne, in Dorsetshire. Its huge yellowish white flowers are as sweet as those of Aerides odoratum; and the largest measure nearly three inches in diameter. The neck of the ovary, which is cuniculate in a remarkable degree, is full four inches long.

We have not seen the pollen-masses of the plant; but it is so much like Br. glauca in habit, that we entertain little doubt of their belonging to the same genus. There are, however, some peculiarities in the structure of this plant, which must not be lost sight of. Its anther-bed has no fringes or other process at the edge, but is deeply sunk and guarded behind by a long subulate tooth, which curves over the anther (fig. 1), and the stigma has three linear foveæ, which all open into one compressed stigmatic passage.

The singular fringe that borders the lip is quite analogous to what occurs in Br. cucullata and others, only it is here extremely extended, so as to give the flower quite a shaggy appearance.

October, 1846.

The following list of the Brasavolas now known to Botanists may be useful to collectors ; (‡ are not yet introduced).

A. Leaves flat.

B. glauca, *Lindl.*—Mexico.
B. Digbyana, *Lindl.*—Honduras.
‡B. Pumilio, *Rchb. fil.*—Mexico.

B. Leaves tapering ; *lip toothed or fringed.*

B. cucullata, *R. Brown.*—West Indies.
B. appendiculata, *Richard & Galeotti.*—Mexico.
‡B. amazonica, *Pöppig & Endl.*—Peru.
B. angustata, *Lindl.*—Demerara.
B. Martiana, *Lindl.*—Brazil.
B. venosa, *Lindl.*—Honduras.

C. Leaves tapering ; *lip quite even at the edge.*

B. grandiflora, *Lindl.*—Honduras, Guayaquil.
B. nodosa, *Lindl.*—West Indies.
B. cordata, *Lindl.*—Brazil.
‡B. subulifolia, *Lindl.*—St. Nevis.
B. tuberculata, *Hooker.*—Brazil.
B. Perrinii, *Lindl.*—Brazil.

ADENIUM Honghel.

The Honghel bush.

PENTANDRIA *MONOGYNIA.*

Nat. ord. APOCYNACEÆ. (DOGBANES, *Vegetable Kingdom, p.* 599.)

ADENIUM, Römer & Schultes.—Calyx 5-partitus, lobis lanceolatis (ex A. Honghel), glandulosis. *Corollæ* tubus inferne cylindraceus, angustatus, dein ampliatus, exappendiculatus, externe pubescens, parte ampliata inferiori longiore infundibuliformi-cylindracea, interne subpubescente; lobis æstivatione sinistrorsum convolutis, non replicatis, tubo brevioribus. *Filamenta* 5, brevissima, superne in tubi parte angustiore; *antheræ* lineari-sagittatæ, medio cum stigmate cohærentes apice setâ pilosâ longitudine corollæ terminatæ. *Glandulæ* circa ovaria nullæ. *Ovaria* 2, globosa (ex Vahl), elliptica (in A. Honghel) et glabra. *Stylus* 1. *Stigma* capitatum, apice bidentatum, basi (ex A. Honghel) membranâ reflexâ cupuliformi cinctum. *Ovula* 00, pendentia, imbricata. *Folliculi.—Semina* (ex A. Honghel) cylindraceo-prismatica, utrinque comosa, coma inferiore serius caduca. *Testa* striata, denticulis retrorsis (sub lente videndis) aspera. *Albumen* tenuissimum. *Embryo* rectus; radicula supera, ovoideo-oblonga, apice conica; cotyledonibus radicula multo brevioribus, ovatis, foliaceis, margine involutis?——Frutices *caudice carnoso, globoso; ramis carnosulis;* foliis *sparsis, in axilla setiferis, integris;* floribus *ad apicem ramorum approximatis, breviter pedicellatis, purpureis* (ex A. Honghel).—Genus habitu Pachypodii, sed seminibus bicomosis!—*Alph. DC. Prodr.* 8. 411.

A. *Honghel;* foliis obovato-oblongis basi attenuatis sessilibus apice obtusis mucronulatis glabris nervis lateralibus obliquis, bracteis lanceolatis v. linearibus pedicello longioribus, pedicellis villosis, calyce extus pubescente, lobis corollæ obovatis obtusis.—*Alph. DeCandolle Prodr.* 8. 412.

This curious thing flowered in the garden of the Horticultural Society in June last, having been presented to that establishment by the Court of Directors of the East India Company, with other singular plants from Aden. It forms one or two fleshy stems, like those of a Plumieria, on the top of a club-footed protuberance, and these stems divide sparingly into a few dumpy branches, each bearing two or three leaves only. Its rate of growth is so slow that half a century is not too great an age to assign to such an individual as that now represented.

Its appearance is the more singular, because from its leafless-stunted branches there appear many very handsome rose-

coloured flowers, bordered with crimson, and fully two inches long.

According to Alphonse DeCandolle this shrub is found in dry places in Wallo and Senegambia, where it is commonly called "Honghel;" we also have it from the late Mr. Forbes, who found it at Delagoa Bay. It would, therefore, appear to be widely dispersed through Africa and the neighbouring part of Asia. Its fruit, on Mr. Forbes's specimen, consists of a pair of slender diverging hoary follicles, each about four inches long.

Fig. 1. represents the calyx, and a part of the corolla cut open to shew the long-tailed anthers, and five rows of glandular hairs which grow on the corolla alternate with the stamens; 2. is a stamen seen from within; 3. is a section of the ovary, style, and stigma.

At present little is known of the habit of this; but it seems to be a plant of easy culture, requiring a dry stove, where it can be fully exposed to bright sunshine. It grows well in a mixture of peat, loam, and sand, when the pot is well drained. Being a plant of slow growth it does not require much water at any period of the year, and should be kept almost dry after the leaves have fallen off, the plant being in a resting state. All plants having thick fleshy stems like this, are formed by nature for those parts of the world where they are periodically subjected to extremes of dryness, and unless we treat them as nature herself does, we cannot expect to be successful in their cultivation.

1

CALYCOTŎME spinosa.

Spiny Calycotome.

MONADELPHIA *DECANDRIA.*

Nat. ord. FABACEÆ. (LEGUMINOUS PLANTS, *Vegetable Kingdom, p.* 544.)

CALYCOTOME, LK. nec *E. Mèy.*—*Calyx* bilabiatus, labiis minute dentatis abbreviatis deciduis tubum circumscissum relinquentibus. *Petala* quatuor, libera, carina oblonga apice obtuse rostra tagenitalia includente, alis fovearum area a margine vexillari ad nervum medium oblique decurrente inferne instructis. *Glandula* stigmatica capitulata, terminalis, in apice styli incurvi extrorsum declivis, nuda. *Legumen* oblongo-lineare, polyspermum, demum spongiosum, endocarpio coriaceo ab epicarpio sejuncto eique in sutura inferiori adhærente. *Semina* arillata.—*Grisebach Flora Rumelica*, 1. 6.

C. *spinosa;* ramis angulatis, foliolis obovato-oblongis, leguminibus glaberrimis.
Cytisus spinosus, *Lamarck dict.* 2. *p.* 247. *DeCand. Prodr.* 2. 154.
Genista spinosa, *Hort.*
Spartium spinosum, *Linn. sp. pl.* 997.
Calycotome spinosa, *Link in Schrad. neue journ.* 2. 50.

Every body who cultivates hardy shrubs knows how difficult it is to settle what is a Genista and what a Cytisus by the old definitions to be found in books, and this difficulty has been increased by the way in which the species have been transferred from one to the other by systematical Botanists. This has arisen from the original adoption of bad marks of distinction, unsuited to the purpose for which they were employed, and the unscientific dread of "innovation" even where most required.

This feeling led to the rejection of Link's genus Calycotome, although it was perfectly natural, and not to be confused with anything else, and notwithstanding the evident advantage of separating one well-defined group from a mass of species collected together by vague characters. Mr. Bentham, however, has now accepted it, (see *Vegetable Kingdom*), and no doubt can exist of the propriety of doing so, whether

the technical character (deciduous teeth and a truncated membranous edge to a calyx subtended by a bract), or the habit (stiff spiny yellow-flowered bushes) be regarded.

In like manner we look forward with confidence to the reception of Boissier's genus *Retama* for Spartiums like *S. monospermum*, of Grisebach's *Syspone* for *Genista sagittalis*, of the same author's *Lembotropis* for *Cytisus nigricans*, and even to the restoration of the ancient genus *Laburnum*.

The specimen now figured was raised in the garden of the Horticultural Society, from seeds presented by George Bentham, Esq.

A pretty shrub, capable of withstanding the ordinary winters in the open border, but injured by severe ones. It grows freely in any dry loamy soil, and flowers in June.

It is increased by seed, and is two years before the plants bloom, which is in May.

It occurs in a wild state in various parts of the south of Europe and Barbary, on stony or rocky hills.

CYCLAMEN littorale.

Shore Cyclamen.

PENTANDRIA *MONOGYNIA*.

Nat. ord. PRIMULACEÆ. (PRIMWORTS, *Vegetable Kingdom, p.* 644.)

CYCLAMEN.—Supra, fol. 1013.

C. *littorale*; radicibus parvis sphæricis, foliis synanthiis altè cordatis subrotundis acutiusculis integerrimis maculatis, floribus odoratis vernalibus, corollæ fauce subrotundâ vix angulatâ laciniis oblongis.

? C. littorale, "*Sadler.*"

? C. europæum, var. ? *Reichenbach Fl. Germanica excursoria,* 1. *p.* 406.

Roots of this plant, collected, we believe, at the Lake of Como, were presented by Mr. Bentham to the Horticultural Society, in whose garden one or two have survived and flowered. It is mentioned as a variety of C. europæum by Mr. Gordon, in his paper on Cyclamens, published in the Gardener's Chronicle (1843, p. 660), in which all the known garden species are mentioned. It is as hardy as any of the sorts, and thrives in sandy loam and leaf mould; but can only be multiplied by seeds.

It is so difficult to ascertain with what species this is combined with European botanists, that we refrain from attempting to decide the point. It is probably one of the Cyclamens brought together under the name of *Cyclamen europæum*, and seems to be included in that species by M. Duby. It cannot, however, belong to the forms collected by Mr. Strangways, under the name of C. europæum (*Bot. Reg. misc. p. 27*), for they are summer flowering plants, with toothed leaves. It cannot be referred to C. *vernum*, for that has angular leaves almost without spots, and long flowers; for the same reason it must be separated from C. *repandum* and *ficariifolium*, which are vernal species. In some respects it approaches C. *Coum*, especially in its perfectly undivided leaves and short flowers; but although the latter are short, they are very much longer

than in C. *Coum*, and the leaves are spotted and differently shaped.

Perhaps it may be the C. *littorale*, placed under C. *europæum* by Reichenbach with doubt, said to have thinner and undivided leaves, and oblong segments of the corolla; and in the absence of any evidence to the contrary we assume it to be that species. There is no doubt that it is as distinct from C. *europæum*, *repandum*, *æstivum* and *hederæfolium*, as they are from one another. The whole genus is still in want of critical examination by a skilful investigator of synonymes, and one who knows how to assign to each its real value. In the meanwhile we cannot but acquiesce in the following sharp remarks of Prof. Reichenbach.

Genus patribus bene cognitum, e temporibus Linnæi, a botanicis e sicco describentibus pessime confusum. Nescio quid magis temerarium sit, ac si (B. Zeit. p. 645) C. coum propterea reduceres, quod inter C. europæi specimina sicca, occurrant folia edentula,—num in librorum artificiali diagnosi expugnatur natura? Species hic expositas examines in vivo, singula conferas citata, tunc de differentia specierum per ducentos annos hortulanis melius ac herboristis cognitis judices.

1
2
3

PILUMNA laxa.

Loose-flowered Pilumna.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. § VANDEÆ—BRASSIDÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181.)

PILUMNA, Lindl. in Bot. Reg. 1844. *misc.* 74.—*Ovarium* tricostatum. *Sepala* et *petala* æqualia patula obliquè inserta. *Labellum* basi columnæ adnatum, subintegrum, unguiculatum, convolutum, inappendiculatum. *Columna* clavata, teres, clinandrio cucullo dentato membranaceo circumdato; buccis duabus carnosis semiclausum. *Stigma* verticale. *Pollinia* 2, posticè fissa, caudiculæ brevi et glandulæ ovatæ adnata.——Herbæ *epiphytæ*, pseudobulbis *vaginatis*, foliis *coriaceis*, pedunculis *radicalibus*.——Genus Aspasiæ proximum, clinandrio cucullato, columnâ tereti, nec non stigmate verticali nec faciali diversum.

P. *laxa* (Lindl. l c.); pseudobulbis tenuibus ancipitibus, folio oblongo subtus maculato, racemo laxo multifloro breviore, bracteis laxis cucullatis obtusis, sepalis petalisque lineari-lanceolatis, labello oblongo indiviso rotundato medio constricto per axin unilamellato.

This new and very distinct genus of Orchids has been hitherto known only from the account given of it in the miscellaneous matter of this work for 1844, at no. 74, where, speaking of the present species, it is remarked, that its general appearance may be understood by its having been mistaken for a Trichopilia. Its flowers are produced in loose erect racemes, out of broad obtuse short membranous spotted bracts. The stalks and ovary are an inch and half long; the latter with three very stout and strong ribs. The sepals and petals are a pale watery green, erect, linear-lanceolate, equal, faintly tinged with purple. The lip is cream-colour, rolled round the column at the base, to which it also is united at the lower end. The column has a singular fringed hood, overlying the anther, and a nearly vertical stigma, closed in by fleshy inflected cheeks. In these circumstances it differs from Aspasia, to which the genus is nearly akin.

We suspect that another species, allied to this, exists in collections, with green flowers; but we know too little of it to be able to define it. Our memoranda relating to it refer

to no. 1680 of Mr. Loddiges' collection, which requires further examination. Pilumna laxa itself has very thin flat pseudo-bulbs, and leaves marked beneath with small purple spots.

Our drawing was made in the garden of the Horticultural Society in October, 1845. Fig. 1. represents the column and lip; 2. pollen-masses and gland; 3. a pollen-mass apart: the hairiness of these bodies represented by the artist, escaped our own observation.

The species, now represented, was found in the woods of Popayan by Mr. Hartweg.

It should be treated in the same manner as most of the other Orchids which are natives of Mexico and Guatemala. A cool stove, which is shaded from bright sunshine during the summer months, and where a damp atmosphere can be kept up, suits it very well. It should be potted in turfy peat, in a well-drained pot, and liberally supplied with water during the growing season. When the growth is perfected for the season less water should be given, and the plant allowed a period of rest.

Like all the other plants belonging to this tribe it is multiplied by dividing the pseudo-bulbs, and this is best done just before the spring growth commences.

CYPRIPEDIUM Irapeanum.

Irapean Lady's Slipper; or *Pelican flower.*

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ. § CYPRIPEDEÆ. (ORCHIDS, *Vegetable Kingdom, p.* 181.)

***CYPRIPEDIUM.—Supra, vol.* 10. *fol.* 788.**

C. *Irapeanum*; caule folioso piloso multifloro, foliis ovatis acuminatis amplexicaulibus, stamine sterili ovato acuminato subtrilobo, sepalis petalisque oblongis æqualibus basi barbatis antico apice bipartito labello obovato ore constricto brevioribus.

C. Irapeanum, *Llave & Lexarza Orch. Mexican.* 2. 10. *Lindl. gen. & sp. orch. p.* 528.

The annexed figure, taken from a plant belonging to Mr. Hugo Finck, in the temporary possession of the Horticultural Society, does scanty justice to this noble species. It is indeed a faithful representation of what appeared in the Society's garden; but we have now before us a specimen collected in Mexico near the town of Irapeo, which has two flowers more than twice the size open at the same time, and two more ready to expand.

It looks like a gigantic form of the downy yellow Lady's Slipper (C. *pubescens*) of the United States. Lexarza says that the Mechoacanians call it *Flor del Pelicano*, but why he does not state.

Fig. 1. represents the column seen in front.

This plant is, however, as nothing compared with a curious thing found in Caraccas by Mr. Linden, and of which a dried specimen is before us. That extraordinary species, the *Uropedium Lindenii* of the Orchidaceæ Lindeniaceæ,* has flowers from fifteen to twenty inches long; that is to say, the petals and lip are drawn out into narrow straps or tails of such

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* Now in the press.

VANDA Batemanni.

Crimson and Yellow Vanda.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDACEÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173.)

VANDA. Supra, fol. 506.

V. *Batemanni* (V. *lissochiloides*, Lindl. gen. & sp. orch. p. 216 ; *Fieldia lissochiloides*, Gaudich. voyage, 424. t. 36) ; radicibus crassissimis, foliis distichis coriaceis oblique emarginatis obtusis racemo laterali multifloro brevioribus, bracteis coriaceis cucullatis squamæformibus, floribus maximis planis coriaceis, alabastris globosis, sepalis obovato-cuneiformibus obtusis, labello triangulari basi saccato lobis ascendentibus acutis apice carnoso sulcato uncinato dente elevato in medio et cristâ brevi transversâ juxta basin.

The honour of discovering this splendid thing is due to M. Gaudichaud, who met with it in the Moluccas ; of introducing it to this country, to Mr. Cuming, who sent it from the Philippines ; of first flowering it to Mr. Bateman, with whom it produced its magnificent sceptre in the stove at Biddulph Grange, in June and July last.

It is a very large erect plant, with remarkably thick aerial roots, produced after the custom of its kindred, sword-shaped curved two ranked hard leaves averaging two feet in length, and a still longer spike of some score of flowers, each full two inches and a half across, flat, leathery, and long enduring. But it is not alone for their size that these flowers are so especially worthy of notice. Their colour is indescribably beautiful. If you look at them in face, they are the richest golden yellow, spotted all over with crimson ; but when seen from behind, they are wholly a vivid purple, fading away at the edges into the violet of Cereus speciosissimus. So that, regard them which way you will, there is nothing but the gayest and richest colours to be seen.

What could possibly have led M. Gaudichaud to compare this Epiphyte with the terrestrial *Lissochilus* we are unable to

imagine, for there is only the slenderest resemblance between the two. His name is, however, on record, and the strict rules of Botanical nomenclature seem to forbid its change. But, as has often been observed, *Summum jus summa injuria*; and it is so manifestly absurd to retain for a plant a name that has originated in some misconception, that we venture, for once, to disregard rules for the sake of common sense. In doing so, we cannot but associate with this noble plant a gentleman whose knowledge of the order, and whose skill in the cultivation of it, have gained him a deathless name.

Fig. 1. represents the lip; 2. the pollen-masses, and their apparatus.

CLEMATIS crispa.

The crisp-flowered Clematis.

POLYANDRIA *POLYGYNIA*.

Nat. ord. RANUNCULACEÆ. (CROWFOOTS, *Vegetable Kingdom, p.* 425.)
CLEMATIS.—L.

Section VITICELLA. Stems climbing. Flowers solitary, long-stalked, more or less leathery.

C. *crispa*; foliolis supremis linearibus lanceolatisve integerrimis bilobisque infimis subrotundis nunc trilobis, sepalis coriaceis medio constrictis apice recurvis crispatis, achæniis maturis brevi-caudatis eplumosis.
C. flore crispo, *Dill. elth.* 1. *t.* 73.
C. crispa, *Linn. sp. pl.* 765. *DeCand. Syst.* 1. 162.

The plants cultivated in gardens, or mentioned by modern authors under the names of C. Viorna, crispa, reticulata, cylindrica, rosea, &c., present a scene of confusion such as is rarely seen even among Botanical compilations. Every body has every one of these things, but each has something different from his neighbour. This has arisen from the unskilful, not to say careless, manner in which the modern writers on Clematis have fulfilled their task.

Let us take C. *Viorna* as an example. This common plant, well known to the old writers, and perfectly distinguished by its small leathery dull brownish purple flowers, is well represented by Jacquin, in his Eclogues, who understood the force of Ray's definition, "purpurea, repens, petalis florum coriaceis." It was, however, miserably characterized by Linnæus, and hence the confusion that has attended its history. For instance, the great purple-flowered species, now called C. *Hendersonii*, was figured for it in Andrews's Repository; and Torrey and Gray quote, as its synonym, the C. *cordata* of the Botanical Magazine, which has as little resemblance to it.

What this C. *cordata* may be does not clearly appear; it is probably the same as a plant subsequently figured in the

Botanical Magazine under the name of C. *crispa*, but so bad a representation as to be unworthy of citation, and certainly having nothing to do with C. *crispa*. Sweet fancied it to be a new species, and called it C. *Simsii*, in which he is followed by Loudon. Sir Wm. Hooker refers it to C. *reticulata*, and he is doubtless right.

This *reticulata* originated with Walter, whose authentic specimen was examined by Dr. Asa Gray, and the definition of the latter botanist, in the "Flora of North America," may be accepted as expressing the real character of the species. Taken along with Elliott's description of C. reticulata, which Torrey and Gray quote as a true synonym, as it surely is, it is clear that the C. *reticulata* is a Texan plant, in our herbarium, remarkable for its netted leaves, and pretty well represented in the Botanical Magazine. Yet the plant figured under the name of C. *reticulata*, in Watson's Dendrologia Britannica, t. 72, has no resemblance to the real plant, but is one of the garden varieties of C. *Viticella*. It is, therefore, unfortunate that Mr. Loudon should have selected that figure to represent C. *reticulata*, at the same time copying Sims's figure of the real *reticulata* for C. *Simsii*.

The *Clematis cylindrica* of the Botanical Magazine is a puzzle. It has long cylindrical flowers, with a pale narrow flat edge, a tapering point, and an intensely purple colour, and with very narrow linear lanceolate leaves. According to Dr. Sims, it is the same as the false *Viorna*, figured in the Botanist's Repository, and above referred to; but that plant is surely what is called C. *Hendersonii* in the gardens, with flowers spreading flat, and very broad leaves, the uppermost of which are simple. We must, therefore, leave the false Viorna out of consideration. Torrey and Gray say, that C. *cylindrica* is the same as what Elliott calls *crispa*, but it agrees with that author's description in little of importance except its bright purple flowers; besides, he has a Cl. *cylindrica* as well, and that *cylindrica* is evidently the plant of the Botanical Magazine. DeCandolle referred to C. *cylindrica* the Cl. *divaricata* of Jacquin's Eclogues, but that plant has very short flower-stalks, smaller and paler flowers, and is an erect, or suberect species. It can have nothing to do with the scrambling C. *cylindrica*. Upon the whole, we are unable to

point with confidence to any garden plant which well agrees with the account in the Botanical Magazine. There is a pale flowered species in cultivation which may be it, but if so, the original figure is little trustworthy.

The last of these perplexed species is C. *crispa*. The authority for the name, and its origin, are to be found in the "Hortus Elthamenis," where it is figured and well described by Dillenius under the name of C. *flore crispo*. It has the narrow upper leaves ascribed to C. *cylindrica*, some 3-lobed leaflets among the lower parts of the branches, and flowers as large as those of the latter species, pale purple, slightly sweet-scented, and much contracted before the sepals roll backward, so that it has a conical tube; or as Dillenius well puts it, the flowers are "oblongi, tubulosi, ad basim crassiores, medium versus angustiores et veluti clausi." Add to which it has the short-tailed mucronate fruit of C. campaniflora. It was raised in Sherard's garden from seeds obtained from Carolina. That it is a very peculiar species there can be no doubt, and upon Dillenius's figure and description full reliance may evidently be placed. Nevertheless a bad figure of a totally different plant, having all the appearance of *Clematis reticulata*, was produced for it in the Botanical Magazine, and copied into Loudon's Arboretum; and Torrey and Gray describe it as a plant with flowers a third smaller than in C. *Viorna*, and bright purple; yet they quote to C. *Viorna* itself the C. *cordata* of the Botanical Magazine, which is not distinguishable from the false *crispa* of the same work; and the latter is quoted by them to C. *crispa*, although it has pale pink flowers, much larger than in *Viorna*, and of the same size as those of the false synonym of C. Viorna above referred to. And then in their supplement they declare that Elliott's C. *crispa* is not *crispa* at all, but C. *cylindrica*. In the midst of all this confusion there is nothing for us to do but to go back to the original source of the name, and to determine what Sherard's plant really was, leaving other critics to settle the modern synonyms if they can.

We entertain no doubt that the species now produced is that of Dillenius, with whose account it exactly agrees. The sweet-scented flowers, pale purple, and contracted in the middle, the crisp edge of the sepals, the long, narrow, upper

leaflets are all characteristic, and the condition of the fruit, which we have not seen more than three-quarters ripe, is not at variance with it. It has been reintroduced to gardens by Messrs. Maule and Sons of the Stapleton Road Nurseries, Bristol, to whom we are indebted for our specimens. It was raised by them from North American seeds marked "A new *sweet-scented* Clematis," and it well deserves that name, for its fragrance is most agreeable especially towards evening. It flowers incessantly during all the summer, that is to say from May to October, and it seems likely to go on blooming as long as it remains in a growing state; on account of its constant flowering we had called it C. semperflorens, until we ascertained that it was the real old long lost C. *crispa*. It is in all respects a charming hardy species.

The conclusion to which the previous discussion leads may be briefly stated thus :—

The true C. *Viorna* is that of Jacquin.

C. *reticulata* bears also the names of C. *cordata*, *crispa*, and *Simsii*.

C. *cylindrica*, as figured in the Botanical Magazine, is a doubtful species, open to future enquiry.

C. *crispa* is quite distinct from the preceding, and is the plant now figured.

Moreover C. *crispa* of the Botanical Magazine is C. *reticulata*, if anything. C. *cordata* of the same work is certainly *reticulata*. C. *Viorna* of the Botanist's Repository is C. *Hendersonii*. C. *Simsii* is C. *reticulata*. C. *reticulata* of the Botanist's Repository is a *Viticella*. C. *divaricata* does not even belong to the division of the genus now under consideration, although quoted to C. *cylindrica*.

ÆSCHYNANTHUS miniatus.

Vermilion Æschynanth.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. GESNERACEÆ. (GESNERADS, *Vegetable Kingdom, p.* 671.)

ÆSCHYNANTHUS, Jack.—Botanical Register, 1841. *t.* 28.

Æ. *miniatus;* prostratus, foliis coriaceis ovalibus utrinque acutis integerrimis, pedunculis axillaribus 3-floris, calyce patulo cyathiformi brevi obsolete lobato basi circumscisso, corollæ tomentosæ labio superiore bilobo inferiore æqualiter tripartito lobis obtusis.

Æsch. radicans, *Wallich Cat. herb. Ind. no.* 798. nec Jackii.

Trichosporum radicans, *Blume Bijdr.* 764. ?

The researches of Mr. Veitch's collector in Java, have brought to our knowledge some remarkable new Æschynanths, which had escaped the previous observation of persons employed in Horticulture. Of these the finest is that lately figured in the Botanical Magazine under the name of *Æ. Lobbianus*, with long, deep purple, shaggy calyxes. Another is the species now produced.

This plant is readily distinguished by its very short, dish-shaped calyx, which has scarcely any distinct marginal lobes, and its vivid vermilion-coloured flowers, with a yellow star in the throat. It yields to none in beauty, and is much finer than Vanden Bosch's Æschynanth, lately imported from Belgium.

It seems to be identical with the Sincapore plant, formerly distributed by Dr. Wallich under the name of *Æ. radicans;* but it cannot be the species of Dr. Jack, which has villous leaves, and a tubular shaggy calyx, with a 5-lobed mouth. It is probably, however, the *Trichosporum radicans* of Blume, a common Java plant, which M. Alphonse DeCandolle has suspected to be a different species from that of Sumatra. (See *Prodr.* ix. 262. *no.* 13.)

It is one of the prettiest plants in cultivation, and, like all its race, lends itself willingly to the care of any one who

has a warm damp house in which to grow it, in a basket or on a block of wood.

The accompanying figure, made from a plant exhibited by Messrs. Veitch and Sons at one of the Garden meetings of the Horticultural Society last summer, brilliant as is the rich vermilion of the large flowers, scarcely does justice to the nature of the plant, which when allowed to trail over the side of its pot, forms a carpet of scarlet flowers and deep green leaves.

Miss Drake del.

TORENIA concolor.

Spotless Violet Torenia.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. SCROPHULARIACEÆ. (FIGWORTS, *Vegetable Kingdom, p.* 681.)

TORENIA, L.—Calyx tubulosus, plicatus vel alatus, apice oblique 5-dentatus vel bilabiatus. *Corolla* ringens, labio superiore emarginato vel bifido, inferiore trifido majore. *Stamina* postica fertilia, antica arcuata antherifera basi appendice dentiformi vel filiformi aucta. *Antheræ* per paria arcte approximatæ vel cohærentes. *Stylus* apice subbilamellatus. *Capsula* oblonga, calycem non excedens.——Herbæ *gerontogeæ, tropicæ, vel paucæ ex orbe veteri allatæ etiam in America tropica vigentes.* Folia *opposita.* Racemi *breves pauciflori fasciculiformes vel rarius elongati, terminales vel ramo excurrente falsò axillares, in dichotomia ramorum siti.*—Bentham in DC. Prodr. x. 409.

Sectio II. *Nortenia.*—(Nortenia, *Pet. Thouars.*)

Calyx 5-costatus, costis 3 magis prominentibus vel alatis, in pedicello subdecurrentibus, apice bilabiatus labiis integris vel superiore 3-dentato inferiore 2-dentato.—Caules elongati, diffusi vel suberecti.—*Bentham, l. c.*

T. *concolor;* diffusa, subpubescens, foliis petiolatis ovato-subrotundis cordatisque serratis, calycibus elongatis costis 5 æqualibus acute carinatis, corolla calyce paulò longiore, filamentorum anticorum appendice brevi obtuso.

Herba *perennis, prostrata, subpubescens.* Caules *acutè tetragoni.* Folia *petiolata, ovata, subcordata, simpliciter serrata.* Pedunculi *acutè tetragoni, biunciales, uniflori.* Calyx *oblongus, papyraceus, quinquefidus,* laciniis *in phalanges duas cohærentibus acutè carinatis; tubo corollæ brevior.* Corollæ tubus *infundibularis, pollicaris, atroviolaceus;* limbus *quadrifidus, patens,* laciniis *rotundatis, supremâ duplò latiore emarginatâ, violaceis, immaculatis.* Filamenta *violacea, 2 anticis longioribus, appendice brevi tereti obtuso auctis.*

This plant is probably regarded in Herbaria as *T. asiatica,* but living specimens forbid its union with that species. Its leaves are roundish ovate, or even cordate, and by no means ovate-lanceolate; their serratures are much smaller. The flowers have no side spots; and the tooth of the larger filaments is far shorter, and more blunt. Probably it is the same plant as was distributed by Dr. Wight, under the name of *Torenia asiatica,* No. 2205, while the true species is Dr.

Wallich's, No. 3953. In form of leaf it agrees with some of the specimens in Dr. Wallich's herbarium, called T. cordifolia, but referred by Mr. Bentham to T. *asiatica*; they, however, have small flowers, and are probably something else.

T. *concolor* was sent to the Horticultural Society, from China, by Mr. Fortune, from whom we have the following memorandum :—

"This plant was found growing in marshy ground, on the mountain of Hongkong, nearly two thousand feet above the level of the sea, and reached the Garden of the Horticultural Society in July, 1844. In China, it flowers in the autumn. After the flowering season is past, the dry weather sets in, and the stems and leaves shrivel up, and remain in this state during the winter months, when the temperature is sometimes down very near the freezing point. During the hot and damp summer months, it grows again with great vigour, and forms it flowers in great profusion.

"In this country it should be treated as a half stove plant, and grown in a moist atmosphere during the summer. As it is a trailing plant, it requires a trellis. After the flowering season is past, it may then be kept rather cool and dry during the winter months.

"It grows readily in any free soil, and is easily multiplied by cuttings."

GARDENIA Devoniana.

The Duke of Devonshire's Gardenia.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CINCHONACEÆ. (CINCHONADS, *Vegetable Kingdom, p.* 761.)
GARDENIA.—L.

G. *Devoniana;* inermis; foliis oppositis papyraceis petiolatis undulatis oblongis acuminatis junioribus subpilosis vetustis glabris venarum axillis subtus tomentosis, flore erecto terminali solitario, ovario pyriformi lævi, sepalis linearibus patulis ad basin usque divisis, corollâ longissimâ tubo gracili fauce campanulatâ lobis 5 obtusis revolutis obliquè emarginatis.
G. Devoniana, *Lindl. in Gardener's Chronicle,* 1846, *Oct.* 3, *p.* 663.

This glorious plant is a native of Sierra Leone, whence living specimens were imported by Mr. Whitfield. It is, perhaps, the finest of its noble race, and is, we trust, worthy of the name which we have ventured to confer upon it. Handsome as Lord Derby's Gardenia certainly is, it is as far removed from this as an earldom from a dukedom.

The flowers are nearly eleven inches long, pure white at first, but after a time changing to a light straw colour, and look much like those of a huge white lily.

Our drawing was made in September last, in the Nursery of Mr. Glendinning of Turnham Green, from whom we have the following momorandum concerning it :—

"The varieties of these plants by no means decrease their value or the interest they possess; on the contrary, no collection of the least pretension can be without them: their extraordinary and conspicuous flowers, together with their perfume, will give them a very high claim. I have one word to add relative to their cultivation, in addition to what has already appeared respecting them. The Cape Jasmine, it is well known, can be made to bloom at a variety of seasons; so can these more gorgeous species, with quite as little trouble. To accomplish this, let them be placed, after flowering, in a high temperature of at least 80°, and charged with moisture.

Plunge them in bottom heat, and keep the syringe upon them two or three times a day; by this means rapid growth is obtained. When this is accomplished, gradually expose them to a lower temperature and plenty of light, when their blossom buds will be set. A cool pit or greenhouse may then receive them; and shortly before their flowers are required, they may successively be removed to a house of medium temperature, when their blossoms will freely expand."

Miss Drake del

HELIOPHILA trifida.

Trifid Suncress.

TETRADYNAMIA *SILIQUOSA.*

Nat. ord. BRASSICACEÆ. (CRUCIFERS, *Vegetable Kingdom, p.* 351.)
HELIOPHILA, L.—Bot. Reg. fol. 838.

H. *trifida;* herbacea glabra viridis, siliquis moniliformibus patulis pendulisve, foliis inferioribus trifidis aut rarius pinnatim 5-fidis lobis subfiliformibus superioribus integris, staminibus lateralibus dente auctis.—*Schauer in Abhandlungen aus dem Gebiete der Naturwissenschaften in Hamburg. vol.* 1. *p.* 217.
H. trifida, *Thunb. prodr.* 108. *fl. cap. ed. Sch.* 495. *DeCand. prodr.* 1. 232.
H. pinnata, *Linn. fil. suppl.* 297. nec *Vent.*

This species has been carefully defined by Mr. Sonder, in his excellent monograph of the genus in the Hamburg Natural History Transactions. He states that it occurs in sandy tracts, on the plain near Cape Town, in the neighbourhood of Doornhoogde, where it flowers in October and November.

In our gardens it proves to be a very pretty, half-hardy annual, requiring to be grown in a mixture of sandy peat and loam, to which should be added a small portion of well decomposed leaf-mould, or rotten dung. The seed should be sown about the end of February, in pots, and raised in a close pit or greenhouse, and treated like other half-hardy annuals. When the plants are sufficiently large, they should be transferred to other pots, not more than three or four plants being placed in each pot. It produces its gay ultramarine blue flowers from June to September, in the greenhouse, and grows about a foot in height.

It was raised in the garden of the Horticultnral Society, from seed purchased from Mr. J. F. Drége of Hamburg.

Fig. 1. represents the stamens and ovary; 2. the ripe pod; 3 and 4. the embryo in different positions.

New Garden Plants.

Zygopetalum *tricolor*; foliis parvis gramineis scapo racemoso 7-8 floro multo brevioribus, labello subrotundo concavo medio constricto apice lunato medio bituberculato.

Guayana, Mr. Loddiges (931*).

This has the smallest flowers of any species yet known. They are pale green with a white lip, banded with broken lines of crimson.

Epidendrum (Encyclium) *subaquilum*; pseudobulbis ovatis cæspitosis, foliis linearibus obliquè emarginatis obtusis scapo glabro filiformi subpaniculato æqualibus, sepalis petalisque linearibus dorsali ascendente lateralibus parallelis, labello semilibero ovato-lanceolatis indiviso utrinque emarginato lamellis 3 spongiosis.

Mexico or *Guatemala*, Mr. Warner.

A small slender plant, with leaves seven or eight inches long, and barely three lines wide. Flowers the size of *E. diffusum*, pale dull brown.

Dendrobium (Onychium) *triadenium*; radicibus villosis, caulibus elongatis teretibus ramosis basi fusiformibus, foliis ovato-oblongis obtusis, paniculâ brevi terminali confertiflorâ racemosâ, sepalis ovatis acutis petalis labelloque oblongis undulatis rotundatis emarginatis hoc glabro utrinque unidentato medio tuberculo tricrenato acuto, mento brevi obtuso, columnâ apice dentatâ, stigmate villoso.

East Indies, S. Rucker, Esq.

This is a lovely plant, with the habit of *Dendrobium crumenatum*, but with a very close racemose panicle of flowers. They are transparent, about as large as in *D. aduncum*, nearly white, with a tinge of rose, a violet spot on the end of the petals and lip, and a 3-lobed yellow tubercle in the middle of the latter. What seems to be a variety, with colourless flowers, has also come under my observation.

CAMPANULA nobilis.

Noble Bell-flower.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CAMPANULACEÆ. (BELL WORTS, *Vegetable Kingdom, p.* 689.)
CAMPANULA, L.—Bot. Reg. fol. 56.

C. *nobilis;* caule ramoso (sesquipedali) foliisque pilosis, foliis grossè biserratis utrinque viridibus radicalibus longè petiolatis altè cordatis ovatis caulinis sessilibus lanceolatis ramis inferioribus brevioribus, floribus versus apices ramorum approximatis racemosis pendulis, calycis ciliati laciniis lineari-lanceolatis corollâ triplò brevioribus appendicibus ovatis, corollâ elongato-campanulatâ extus glabrâ intus villosâ, stigmate trifido. —*Lindley in Journal of Hort. Soc. vol.* 1. *p.* 232.

This very nice herbaceous plant was sent to the Horticultural Society by Mr. Fortune from China. The following account has been given of it in the Journal of the Horticultural Society :—

" The root-leaves of this fine herbaceous plant are deeply heart-shaped, of a bright pale green, and placed on footstalks from 6 to 9 inches long, forming a large tuft. From among them, and to rather more than twice their height, rises the flowering stem, which branches a little at the bottom, and bears upon its divisions several fine nodding flowers, which seem to be the largest yet seen among the genus Campanula. They are something like those of Canarina, nearly 3 inches long, and $1\frac{1}{2}$ in diameter. The corolla is pale purple on the outside, and nearly smooth, but paler within, abundantly sprinkled with bright purple dots, and closely covered with long delicate horizontal hairs.

" It is allied to the Canterbury Bell (*Campanula Medium*), and like it has a calyx furnished with reflexed appendages ; but its stigma is trifid, on which account it more nearly approaches the Sarmatian and Dotted Bellworts (*C. sarmatica* and *punctata*). It is, however, perfectly distinct, and a grand addition to handsome hardy herbaceous plants.

" Hitherto it has been treated as a greenhouse plant, but Mr. Fortune is of opinion that it will prove hardy. It grows freely in rough sandy peat, and, like most of the species of Campanula, requires an ample supply of water during the spring months. It may be abundantly multiplied by dividing its roots, and possibly from seeds also."

Mr. Fortune has favoured us with the following additional note:—

" There can be no doubt that this species will prove as hardy in England as the common Canterbury Bell. It is a great favourite with the Chinese in the northern parts of the empire. The name it bears is the *Tye-Chung-wha*, or purple bell-flower, which coincides rather curiously with the " blue bells of Scotland," a pretty name which we give to another species of the genus. It was first found cultivated in the gardens of the Mandarins at Chusan and Shanghae, and subsequently in nurseries where it was grown for sale.

" In the garden of the Horticultural Society it is found to grow freely in such soil and situations as are suitable to the more common species of the same family. It is easily multiplied by dividing the roots in autumn or winter, when in a dormant condition. It flowers in summer, and is a very nice addition to our fine flowering hardy herbaceous plants, and a fit companion to the favourite Canterbury Bell."

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SWAINSONA Greyana.

Capt. Grey's Swainsona.

DIADELPHIA *DECANDRIA.*

Nat. ord. FABACEÆ. (LEGUMINOUS PLANTS, *Vegetable Kingdom, p.* 544.)

SWAINSONA.—Bot. Reg. fol. 994.

S. *Greyana;* suffruticosa incano-tomentosa, foliolis 5-8 jugis oblongis retusisve, racemis multifloris folio longioribus, calycibus lanatis bibracteatis, leguminibus glabris inflatis stipite andrœceo longiore.

A gay-flowered half herbaceous plant, sent to the Horticultural Society by his Excellency Captain Grey, from the banks of the Murray in New Holland, where it had been previously found by Sir Thomas Mitchell. It has dull brownish hoary leaves, from whose axils a profusion of large purple flowers, with a white eye, appear in the summer. Our drawing was made in the garden of the Horticultural Society in July last.

Why the Swainsonas are said to have two calli on the calyx we know not; the original species does not appear to possess them: but they all have two remarkable ones near the base of their vexillum.

This species requires the same kind of treatment as the common Lotus Jacobæa, growing freely in a soil composed of sandy loam and a small portion of well decomposed dung.

It is easily increased by cuttings of the young shoots, in the early part of summer, and flowers freely during the summer and autumn, if kept in the greenhouse.

Fig 1. represents the ripe pod; 2. a seed; 3. the embryo as taken out of the seed; the stamens and style.

New Garden Plant.

Xiphidium *giganteum*; foliis latissimis margine integerrimis acutis paniculâ racemosâ contractâ multiflorâ brevioribus, rachi altè sulcatâ pubescente ramulis omnibus simplicibus secundifloris, floribus albis glabris.
Caraccas, His Grace the Duke of Northumberland.

This flowered at Syon in October. It is a large Iris-like plant, with leaves more than two feet long, and $2\frac{1}{2}$ inches broad. When in flower it is nearly four feet high. The blossoms are small, white, smooth, and arranged in one-sided racemes, which closely cover the very strong axis of inflorescence. It is not a plant of sufficient beauty to deserve cultivation on that account; but it is of considerable botanical interest as a new species of a genus little known to science. The examination of it has shewn that the cells of the ovary are opposite to the petals, as in other Lilyworts, and that it possesses no character to distinguish it from that order, unless the fruit, which is unknown to us, should furnish one.

ACACIA mœsta.

The Mourning Wattle.

POLYGAMIA *MONŒCIA.*

Nat. ord. FABACEÆ. (LEGUMINOUS PLANTS, *Vegetable Kingdom, p.* 544.)

ACACIA.—Bot. Reg. fol. 98.

A. *mœsta;* pubescens, nigroviridis, ramulis angulato-striatis, phyllodiis adpressis sparsis binerviis oblongis cum mucrone, spicis cylindricis densis phyllodia superantibus.

For a specimen of this plant we are indebted to an anonymous correspondent of the Gardener's Chronicle, from whom it was received in April last. Upon submitting it to Mr. Bentham, for his opinion, we were favoured with the following memorandum:—

"The Acacia is so very close upon some of the broad short-leaved forms of A. verticillata, that although it is very different from the common forms, I know not how to characterise it as distinct. It is an extreme of my var. latifolia, such as I have seen before, and intended to make a species once, till I got hold of a set of intermediates from that to A. ruscifolia of Botanical Magazine; and from this, to the common form, intermediates are frequent enough. We get so many of these Acacias by bits and scraps, without fruit, that we are obliged to take the chief character from the phyllodia, which in some species vary even with the age of the plant. At the same time, I do not affirm that some of these broad-leaved forms may not be distinct, only that I have as yet found no character that will hold good when you get a number of specimens from different sources."

Notwithstanding this high opinion as to the plant being a mere variety of A. verticillata we are induced to separate it because its leaves are not verticillate, nor narrow, nor spreading, and because of its singular dull or even black

green colour. For, although we find among our New Holland wild specimens, especially those so prodigally furnished to his friends in England by Mr. Gunn, a great many variations, yet the whole of them are constant to the narrowness, whorling, and spreading character of A. verticillata, of none of which is there any trace here.

The species is evidently a handsome greenhouse plant, but from what part of New Holland it was received we have no information.

IMPATIENS platypetala.

Broad-petaled Balsam.

PENTANDRIA *MONOGYNIA.*

Nat. ord. BALSAMINACEÆ. (BALSAMS, *Vegetable Kingdom, p.* 490.)

IMPATIENS.—Linn.

* *Leaves verticillate.*

I. *platypetala;* perennis, tuberosa, glabra, foliis verticillatis oblongo-lanceolatis argutè serratis, petiolis eglandulosis, pedunculis unifloris folio brevioribus calcari filiformi falcato æqualibus, petalis transversis obcordatis, ovario glabro.

There does not appear to be any description of this charming Balsam, which belongs to the small division of species having whorled leaves. It is most nearly allied to I. latifolia, or at least to the plant distributed by Dr. Wight under that name (451), but that species has a shorter and thicker spur, long fringe-like glands at the base of the leaves, and a good deal of yellowish hairiness, especially on the young shoots and ovary. The I. latifolia of Linnæus is said to have alternate leaves.

The species now described requires to be kept in a moist atmosphere and strong heat during the growing season, to be treated like such plants as Gloxinia, Achimenes, &c. and to be afterwards rested by withholding moisture. It is increased freely by cuttings when young, and grows freely in any light rich soil. It flowers during most part of the summer, and is a great beauty when kept from drying winds, which ruin it.

It was exhibited at one of the Garden Meetings of the Horticultural Society last summer, when it was much admired, and received a silver medal. For the specimen now figured we are indebted to Messrs. Veitch of Exeter, who imported it from Java.

NEW GARDEN PLANT.

HOYA imperialis.

H. *imperialis* (Hoyæ veræ) ; caule volubili, petiolis costâque tomentosis, foliis coriaceis angustè oblongis ciliatis glabris aveniis apiculatis apice recurvis basi rotundatis v. leviter cordatis, pedunculis tomentosis pendulis foliis brevioribus, umbellis multifloris, sepalis ovatis obtusis tomentosis, corollæ maximæ lobis triangularibus stellatim patulis ciliatis intus lævibus fauce tomentosâ, coronæ stamineæ foliolis compressis bilobis lobo interiore acuto subdentato postico ovato obtuso.

This is the most noble climbing plant we have ever seen. Beautiful specimens in flower have for some months been in our possession, sent from Borneo by Mr. Lowe, Junr. ; but we have refrained from publishing an account of them, under the supposition that no living plant had reached England. We are now, however, able to state, that the plant is in the possession of Mr. Lowe of Clapton, who has already begun to put it into the trade. Imagine, then, a true Hoya, with woolly stems, leaves six inches long, and clusters of the most magnificent flowers, forming a diadem of ten rays ; each flower fully three inches in diameter, and with the delicate texture of the common Hoya carnosa, and he will have some notion of this superb species. In Mr. Lowe's letter from Sarawak, dated January 12, 1846, we have the following account of its discovery. " On the next day, when in the territory of the Gumbang Dyaks, I found another curious plant, belonging to Asclepiads; it is an epiphytal climber ; there was but one individual, growing from the decayed part of a tree, also overhanging the river. The flowers are large and in umbels ; the leaves are leathery ; and the stem abounds in a white, perhaps acrid, juice. The contrast between the purple of the petals and the ivory white of the parts of fructification renders it highly beautiful."

This species is certainly new, unless it should be the Asclepias Sussuela of Roxburgh, a Moluccan plant, said to have flowers nearly three inches in diameter ; but that botanist cites, without any doubt, the Corona Ariadnes of Rumphius, which has flowers only as large as a shilling (denarius), and therefore cannot be the species now described. Neither can this be the Hoya speciosa of Decaisne, which has the flowers velvety inside, and only one inch and three-quarters across ; nor the Hoya grandiflora of Blume, which has leaves woolly beneath. Those glorious species are still to be imported, one from Java, the other from Amboyna, and either would form an invaluable addition to our gardens.

CŒLOGYNE ochracea.

Ochre-spotted Cœlogyne.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ. § EPIDENDREÆ. (ORCHIDS, *Vegetable Kingdom, p.* 173.)

CŒLOGYNE.—Botanical Register, vol. 11. *fol.* 868.

C. *ochracea ;* pseudobulbis oblongis apice tetragonis, foliis augustè lanceolatis obscurè 5-nerviis in petiolum angustatis racemo paucifloro apice nutante longioribus, labelli trilobi intus pubescentis lobis lateralibus rotundatis intermedio ovato acuminato obtuso sinu denticulato integrove lamellis 2 rectiusculis integris cis medium apicem evanescentibus lineâ brevi elevatâ apice dentiferâ prope basin interjectâ.

The specimen from which the annexed figure was taken was supplied by Thomas Brockelhurst, Esq., of the Fence, near Macclesfield, in April last. Its pure white flowers, with bright orange yellow blotches on the lip, are very pretty ; and they are, moreover, extremely sweet-scented.

We possess the plant from several localities among the late Mr. Griffith's valuable Indian collection. Darjeeling, Bootan, and the Mishmee hills all produce it. With the Mishmee specimens we have a note from its lamented discoverer, stating that it is common on Thumathaya and Laimplang-thaya. These specimens differ a little among each other in regard to the amount of toothing present at the sinus of the lip, and as to its exact form ; but they all belong evidently to the same species.

This plant must be cultivated in the damp stove or Orchideous House. Like most of such plants, it may either be grown in a pot, or fixed upon a block of wood, and suspended from the rafters of the house. The chief point to be attended to is to rest it judiciously, by keeping it cool and dry, after the growth is completed for the season.

It is multiplied in the usual manner, by dividing the pseudo-bulbs.

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